

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 11:46:54 ; Search time 39 Seconds
(without alignments)
687.668 Million cell updates/sec

Title: US-09-852-261-2_COPY_26_110
Perfect score: 85
Sequence: 1 NKPFGYSSSRAPQGTGIVD.....STNNKTKSRKSGTFEEHK 85

Scoring table:
Gapop 60.0 , Gapext 60.0

Searched: 1017041 seqs, 315518202 residues

Word size : 0

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Listing first 100 summaries

Database :

SPTREMBL_25:*
1: sp_archaea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mmc:*
8: sp_organelle:*
9: sp_phase:*
10: sp_plant:*
11: sp_rodent:*
12: sp_virus:*
13: sp_vertebrate:*
14: sp_unclassified:*
15: sp_virus:*
16: sp_bacteriaph:*
17: sp_archaeap:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	83	97.6	139	4 Q13429	Q13429 homo sapien
2	61	71.8	130	4 Q9NP10	Q9NP10 homo sapien
3	61	71.8	137	4 Q14620	Q14620 homo sapien
4	58	68.2	133	6 Q9NIC1	Q9NIC1 bos taurus
5	49	57.6	139	6 P79167	P79167 equus caball
6	43	50.6	66	6 Q9NIS6	Q9NIS6 capreolus c
7	41	48.2	57	6 Q28236	Q28236 cervus elap
8	31	36.5	69	6 Q02807	Q02807 bubalus bub
9	31	36.5	127	11 P97899	P97899 rattus sp.
10	31	36.5	153	11 Q8C4U6	Q8C4U6 mus musculu
11	31	36.5	153	11 Q8CAR0	Q8CAR0 mus musculu
12	16	18.8	153	13 Q93380	Q93380 meleagris g
13	13	15.3	104	13 Q7T107	Q7T107 dicentrarch
14	13	15.3	108	13 Q800N0	Q800N0 morone chry
15	13	15.3	108	13 Q800M9	Q800M9 morone saxa
16	13	15.3	108	13 Q800M8	Q800M8 morone chry

17	13	15.3	108	13 Q800W7	Q800W7 morone amer
18	13	15.3	116	13 Q91161	Q91161 oncorhynch
19	13	15.3	117	13 Q91476	Q91476 salmo salar
20	13	15.3	145	13 Q91475	Q91475 salmo salar
21	13	15.3	149	13 Q91231	Q91231 oncorhynch
22	13	15.3	155	13 Q91162	Q91162 oncorhynch
23	13	15.3	159	13 Q93607	Q93607 paratichthy
24	13	15.3	161	13 Q91230	Q91230 oncorhynch
25	13	15.3	185	13 Q57436	Q57436 paratichthy
26	13	15.3	185	13 Q91157	Q91157 acanthopagr
27	13	15.3	186	13 Q9PSX5	Q9PSX5 paratichthy
28	13	15.3	186	13 Q93527	Q93527 paratichthy
29	13	15.3	186	13 Q800V5	Q800V5 siganus gut
30	13	15.3	188	13 Q7T1A7	Q7T1A7 perca flav
31	13	15.3	188	13 P81268	P81268 oncorhynch
32	13	15.3	188	13 Q91965	Q91965 oncorhynch
33	13	12.9	86	6 Q85QC4	Q85QC4 trichosurus
34	11	12.9	184	13 Q42336	Q42336 myoxocephal
35	10	11.8	117	13 Q91914	Q91914 ctenopharyn
36	10	11.8	161	13 Q90VV9	Q90VV9 brachydant
37	10	11.8	161	13 Q9PMK2	Q9PMK2 carassius a
38	10	11.8	161	13 Q98SR6	Q98SR6 megalobrama
39	10	11.8	161	13 Q9Y182	Q9Y182 carassius a
40	10	11.8	161	13 Q800D5	Q800D5 megalobrama
41	10	11.8	178	13 Q91B10	Q91B10 cyprinus ca
42	9	10.6	53	13 Q90YK0	Q90YK0 gallus gall
43	9	10.6	62	6 Q9XS88	Q9XS88 equus caball
44	9	10.6	62	6 Q912A0	Q912A0 carassius a
45	9	10.6	92	13 Q8UW9	Q8UW9 salmo salar
46	9	10.6	104	6 Q86Z87	Q86Z87 bos taurus
47	9	10.6	106	6 Q9MYZ6	Q9MYZ6 trichosurus
48	9	10.6	113	6 Q9N1S5	Q9N1S5 capreolus c
49	9	10.6	123	6 Q8WJ15	Q8WJ15 sus scrofa
50	9	10.6	129	13 Q9PU30	Q9PU30 oreochromis
51	9	10.6	135	13 Q9PTB0	Q9PTB0 gallus gall
52	9	10.6	141	6 Q86ZG1	Q86ZG1 bos taurus
53	9	10.6	149	6 Q9W1X4	Q9W1X4 bos indicus
54	9	10.6	154	11 Q63265	Q63265 ratius norv
55	9	10.6	167	13 Q9D8T4	Q9D8T4 myoxocephal
56	9	10.6	177	13 Q7Z2T6	Q7Z2T6 gallus gall
57	9	10.6	187	13 Q57687	Q57687 raenopygia
58	9	10.6	187	13 P79890	P79890 gallus gall
59	9	10.6	210	13 Q91443	Q91443 equus aca
60	9	10.6	215	13 Q73721	Q73721 tilapia sp.
61	9	10.6	215	13 Q42429	Q42429 latas calca
62	9	10.6	215	13 Q800Y4	Q800Y4 siganus gut
63	9	10.6	215	13 Q800B6	Q800B6 paratichthy
64	8	9.4	50	6 Q27962	Q27962 bos taurus
65	8	9.4	79	13 P81416	P81416 oncorhynch
66	8	9.4	126	13 Q9YGY5	Q9YGY5 oreochromis
67	8	9.4	182	13 Q73720	Q73720 oreochromis
68	8	9.4	182	13 Q42289	Q42289 oreochromis
69	8	9.4	182	13 P79824	P79824 oreochromis
70	8	9.4	471	10 Q9ZWB3	Q9ZWB3 arabidopsis
71	8	9.4	769	10 Q23275	Q23275 arabidopsis
72	8	9.4	772	10 Q8VYX0	Q8VYX0 arabidopsis
73	8	9.4	772	10 Q8RW82	Q8RW82 arabidopsis
74	8	8.2	82	5 Q17193	Q17193 bombyx mori
75	7	8.2	98	10 Q7XP25	Q7XP25 oryza sativ
76	7	8.2	128	2 Q93JMO	Q93JMO mycobacteri
77	7	8.2	132	10 Q8SAA4	Q8SAA4 arabidopsis
78	7	8.2	146	8 Q9WFF3	Q9WFF3 beta vulgar
79	7	8.2	146	10 Q93VW8	Q93VW8 arabidopsis
80	7	8.2	152	12 Q55760	Q55760 chilo litre
81	7	8.2	191	10 Q7XDR5	Q7XDR5 oryza sativ
82	7	8.2	197	13 Q9PUD0	Q9PUD0 brachydant
83	7	8.2	197	13 Q8UUI9	Q8UUI9 brachydant
84	7	8.2	226	16 Q9RSH7	Q9RSH7 deinococcus
85	7	8.2	248	10 Q9FRV9	Q9FRV9 calysetegia
86	7	8.2	273	16 Q06152	Q06152 mycobacteri
87	7	8.2	273	16 Q7T1Y9	Q7T1Y9 mycobacteri
88	7	8.2	304	17 Q58240	Q58240 pyrococcus
89	7	8.2	304	17 Q8U3U6	Q8U3U6 pyrococcus

90 7 8.2 309 17 Q9Y98 pyrococcus
91 7 8.2 310 10 Q23550 023550 arabidopsis
92 7 8.2 327 10 Q9SDC8 Q9SDC8 oryza sativ
93 7 8.2 358 6 Q28619 Q28619 oryctolagus
94 7 8.2 372 17 Q976G6 Q976G6 sulfolobus
95 7 8.2 367 17 Q980U0 Q980U0 sulfolobus
96 7 8.2 386 3 Q8X0R8 Q8X0R8 neosporea
97 7 8.2 389 5 Q95018 Q95018 caenorhabdi
98 7 8.2 399 4 Q96A40 Q96A40 homo sapien
99 7 8.2 423 10 Q9CS31 Q9CS31 arabidopsis
100 7 8.2 429 17 Q980V3 Q980V3 sulfolobus

ALIGNMENTS

RESULT 1
Q13429 PRELIMINARY; PRT; 139 AA.
AC Q13429;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor-I (Fragment).
GN IGF-I.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxId=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=95237119; PubMed=7720641;
RA Chew S.L., Lavender P., Clark A.J., Ross R.J.;
RT "An alternatively spliced human insulin-like growth factor-I
transcript with hepatic tissue expression that diverges away from the
RT mitogenic IBI peptide.";
RT Endocrinology 136:1939-1944(1995).
RL -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; U40870; AAA96152.1; -.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM0076; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT NON TER 1
SQ SEQUENCE 139 AA; 15611 MW; A62271872CA29DE4 CRC64;
Query Match 97.6%; Score 83; DB 4; Length 139;
Best Local Similarity 100.0%; Pred. No. 3, 2e-83;
Matches 83; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGGSSRRAPQTGIVDECCFSCDLRLRYCAPLKPAKSARSVRAQRHTDMPKXQ 60
DB 55 NKPTGGSSRRAPQTGIVDECCFSCDLRLRYCAPLKPAKSARSVRAQRHTDMPKXQ 114
QY 61 KYOPSTMTKTSQRKSGSTFE 83
DB 115 KYOPSTMTKTSQRKSGSTFE 137

RESULT 2
Q9NP10 PRELIMINARY; PRT; 130 AA.
AC Q9NP10;
DT 01-OCT-2000 (TREMBlrel. 15, Created)
DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)

DE IGF1 protein precursor.
GN IGF1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxId=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC MEDLINE=8065102; PubMed=3683205;
RA Rall L.B., Scott J., Bell G.I.;
RT "Human insulin-like growth factor I and II messenger RNA: isolation of
RT complementary DNA and analysis of expression.";
RT Meth. Enzymol. 146:239-248(1987).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; M29644; AAA52543.1; -.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM0076; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KM Signal.
FT CHAIN 1 25 POTENTIAL.
FT CHAIN 26 95 POTENTIAL.
SQ SEQUENCE 130 AA; 14406 MW; 970FBAECPA0352D CRC64;
Query Match 71.8%; Score 61; DB 4; Length 130;
Best Local Similarity 100.0%; Pred. No. 5, 1e-59;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGGSSRRAPQTGIVDECCFSCDLRLRYCAPLKPAKSARSVRAQRHTDMPKXQ 60
DB 51 NKPTGGSSRRAPQTGIVDECCFSCDLRLRYCAPLKPAKSARSVRAQRHTDMPKXQ 110
QY 61 K 61
DB 111 K 111

RESULT 3
Q14620 PRELIMINARY; PRT; 137 AA.
AC Q14620;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor I precursor.
GN IGF1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxId=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC MEDLINE=91187000; PubMed=2082190;
RA Tobin G., Yee D., Brunner N., Rotwein P.;
RT "A novel human insulin-like growth factor I messenger RNA is expressed
RT in normal and tumor cells.";
RT Mol. Endocrinol. 4:1914-1920(1990).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; M37484; AAA52789.1; -.
DR PIR; A36552; A36552.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PR00277; INSULIN.
 DR SMART; SMO0078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW SIGNAL.
 FT SIGNAL 1 32
 FT CHAIN 137
 SQ SEQUENCE 137 AA; 1517 MM; BFCOD1IE32AB75D CRC64;

Query Match
 Best Local Similarity 71.8%; Score 61; DB 4; Length 137;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPKPSARSVPARQRTDMPK 60
 DB 58 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPKPSARSVPARQRTDMPK 117

QY 61 K 61
 DB 118 K 118

RESULT 4

Q9N1C1 PRELIMINARY; PRT; 133 AA.
 ID Q9N1C1
 AC Q9N1C1
 DT 01-OCT-2000 (TREMBlrel. 15, Created)
 DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE Insulin-like growth factor I (Fragment).
 GN IGF1.
 OS Bos taurus (Bovine).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Bovinae; Bos.
 OX NCBI_Taxid=9913;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Lien S., Karlsten A., Klemetsdal G., Vage D.I., Olsaker I.,
 RA Klungland H., Asland M., Heringstad B., Ruane J., Gomez-Raya J.;
 RT "A primary screen of the bovine genome for quantitative trait loci
 affecting twinning rate."
 RL Submitted (DEC-1999) to the EMBL/GenBank/DBJ databases.
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; AF210387; AAF72409.1; JOINED.
 DR EMBL; AF210385; AAF72409.1; JOINED.
 DR EMBL; AF210386; AAF72409.1; JOINED.
 DR HSP; P01343; ZGF1.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SMO0078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 FT NON TER 1
 SQ SEQUENCE 133 AA; 14674 MM; A6991DBC875C103B CRC64;

Query Match
 Best Local Similarity 68.2%; Score 58; DB 6; Length 133;
 Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPKPSARSVPARQRTDMPK 58
 DB 54 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPKPSARSVPARQRTDMPK 111

RESULT 5

P79167 PRELIMINARY; PRT; 139 AA.
 AC P79167;
 DT 01-MAY-1997 (TREMBlrel. 03, Created)

DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C)
 DE (Fragments).
 GN IGF1.
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
 OX NCBI_Taxid=9796;
 RN [1]
 RP SEQUENCE OF 1-122 FROM N.A.

RA TISSUE=Liver;
 RX MEDLINE=97013467; PubMed=8860303;
 RA Ote K., Rozell B., Gesabo A., Engstrom M.;
 RT "Cloning and sequencing of an equine insulin-like growth factor I cDNA
 and its expression in fetal and adult tissues."
 RL Gen. Comp. Endocrinol. 102:11-15(1996).
 RN [2]
 RP SEQUENCE OF 123-139 FROM N.A.

RA Nixon A.J., Toland B.D., Sandell L.J.;
 RL Submitted (JAN-1997) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
 ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
 MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -1- SUBCELLULAR LOCATION: SECRETED.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P79167-1; Sequence=Displayed;

CC Name=IGF-IA;
 CC IsoId=P51458-1; Sequence=External;
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; U28070; AAA68952.1; -;
 DR EMBL; U85271; ABA47484.1; -;
 DR HSP; P01343; ZGF1.

DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0008085; F:growth factor activity; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SMO0078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.

DR Insulin family; Growth factor; Signal; Alternative splicing.
 KW Insulin family; Growth factor; Signal; Alternative splicing.
 FT SIGNAL 1 ?
 FT PROPEP 48 ?
 FT CHAIN 49 118 BY SIMILARITY.

FT DOMAIN 49 77 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 78 89 B.
 FT DOMAIN 90 110 C.
 FT DOMAIN 111 118 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 139 E PEPTIDE.
 FT NON CONS 122 123
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.

FT NON TER 139
 SQ SEQUENCE 139 AA; 15612 MM; CDC08F19C261A2C CRC64;

Query Match
 Best Local Similarity 57.6%; Score 49; DB 6; Length 139;
 Matches 49; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPKPSARSVPARQRTDMPK 49
 DB 74 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPKPSARSVPARQRTDMPK 122

RESULT 6

O9N1S6 PRELIMINARY; PRT; 66 AA.
 AC O9N1S6;
 DT 01-OCT-2000 (TREMBlrel. 15, Created)

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DT 01-OCT-2000 (TREMblrel. 15, last sequence update)
DT 01-JUN-2003 (TREMblrel. 24, last annotation update)
DE Insulin-like growth factor I (Fragment).
GN IGF-1.
OS Capreolus capreolus (Roer deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervidae;
OC Cervidae; Odocoileinae; Capreolus.
OC NCBI_TaxID=9858;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
RX MEDLINE=20532861; PubMed=11078967;
RA Wagener A., Blottner S., Gortitz F., Fickel J.;
RT "Detection of growth factors in the testis of roe deer (Capreolus
RT capreolus).";
RL Anim. Reprod. Sci. 64:65-75(2000).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL: AF152588; AAF73227.1; -.
DR HSSP: P01343; ZGR1.
DR GO: GO:0005576; C:extracellular; IEA.
DR GO: GO:0005179; F:hormone activity; IEA.
DR GO: GO:0007582; P:physiological processes; IEA.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00276; INSULINA.
DR SMART: SM00078; IIGF.1.
DR PROSITE: PS00262; INSULIN; 1.
FT NON_TER 1
FT NON_TER 66
SQ SEQUENCE 66 AA; 7422 MW; 4BDSACEPADF73E51 CRC64;

Query Match 50.6%; Score 43; DB 6; Length 66;
Best Local Similarity 100.0%; Pred. No. 1.8e-39;
Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRLMYCAPLKP 43
Db 15 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRLMYCAPLKP 57

RESULT 7
Q28236 PRELIMINARY; PRT; 57 AA.
ID Q28236;
AC Q28236;
DT 01-NOV-1996 (TREMblrel. 01, Created)
DT 01-NOV-1996 (TREMblrel. 01, last sequence update)
DT 01-JUN-2003 (TREMblrel. 24, last annotation update)
DE Insulin-like growth factor I (IGF-I) (Somatomedin C) (Fragment).
GN IGF1 OR IGF-1.
OS Cervus elaphus (Red deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervidae;
OC Cervidae; Cervinae; Cervus.
OC NCBI_TaxID=9860;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=ANTLER;
RX MEDLINE=98233260; PubMed=9571767;
RA Francis S.M., Suttie J.M.;
RT "Detection of growth factors and proto-oncogene mRNA in the growing
RT tip of red deer (Cervus elaphus) antler using reverse-transcriptase
RT polymerase chain reaction (RT-PCR).";
RL J. Exp. Zool. 281:36-42(1998).
CC -1- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA,
CC ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A
CC MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
CC -1- SUBCELLULAR LOCATION: SECRETED.
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL: U62106; AAB05252.1; -.
DR HSSP: P01343; ZGR1.
DR GO: GO:0005576; C:extracellular; IEA.

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DR GO: GO:0006083; F:growth factor activity; IEA.
DR GO: GO:0005179; F:hormone activity; IEA.
DR GO: GO:0007582; P:physiological processes; IEA.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00276; INSULINA.
DR SMART: SM00078; IIGF.1.
DR PROSITE: PS00262; INSULIN; 1.
DR Insulin family; Growth factor.
KM Insulin family; Growth factor.
FT NON_TER 1
FT CHAIN 1
FT DOMAIN <1 51 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 11 10 B.
FT DOMAIN 21 22 C.
FT DOMAIN 23 43 A.
FT DOMAIN 44 51 D.
FT PROPEP 52 >57 Z PEPTIDE.
FT DISULFID 28 33 BY SIMILARITY.
FT NON_TER 57
FT NON_TER 57
SQ SEQUENCE 57 AA; 6462 MW; 3DE0C4FBAED5932 CRC64;

Query Match 48.2%; Score 41; DB 6; Length 57;
Best Local Similarity 100.0%; Pred. No. 2.6e-37;
Matches 41; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRLMYCAPLKP 41
Db 7 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRLMYCAPLKP 47

RESULT 8
Q02807 PRELIMINARY; PRT; 69 AA.
ID Q02807;
AC Q02807;
DT 01-JUL-1997 (TREMblrel. 04, Created)
DT 01-JUL-1997 (TREMblrel. 04, last sequence update)
DT 01-JUN-2003 (TREMblrel. 24, last annotation update)
DE Pro-Insulin like growth factor IA (IGFIA) (Fragment).
GN Pro-Insulin like growth factor IA (IGFIA) (Fragment).
OS Bubalus bubalis (Domestic water buffalo).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bubalus.
OC NCBI_TaxID=89462;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Lung;
RA Daliri M., Appa Rao K.B.C., Kaur G., Garg S., Patil S., Toley S.M.;
RT "The expression of growth factor ligand and receptor genes in
RT preimplantation stage buffalo embryos and oviductal epithelial
RT cells.";
RL Submitted (JAN-1997) to the EMBL/Genbank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL: Y10691; CAA71694.1; -.
DR HSSP: P01343; ZGR1.
DR GO: GO:0005576; C:extracellular; IEA.
DR GO: GO:0005179; F:hormone activity; IEA.
DR GO: GO:0007582; P:physiological processes; IEA.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS: PR00276; INSULINA.
DR SMART: SM00078; IIGF.1.
DR PROSITE: PS00262; INSULIN; 1.
FT NON_TER 1
FT NON_TER 69
SQ SEQUENCE 69 AA; 7501 MW; ACFE4DF0AF49B6C6 CRC64;

Query Match 36.5%; Score 31; DB 6; Length 69;
Best Local Similarity 100.0%; Pred. No. 3.1e-26;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 11 RRAPOTGIVDECCFRSCDLRLRLMYCAPLKP 41
Db 35 RRAPOTGIVDECCFRSCDLRLRLMYCAPLKP 65

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RESULT 9
ID 08C4U6 PRELIMINARY; PRT; 127 AA.
AC 08C4U6;
DT 01-MAY-1997 (TREMBlrel. 03, Created)
DT 01-MAY-1997 (TREMBlrel. 23, Last sequence update)
DE Insulin-like growth factor I.
OS Rattus sp.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX NCBI_TaxID=10118;
RN [1]
RP PARTIAL SEQUENCE FROM N.A.
RX MEDLINE=87222423; PubMed=5034909;
RA Shimatsu A., Rotwein P.;
RT "Mosaic evolution of the insulin-like growth factors.";
RL J. Biol. Chem. 262:7894-7900(1987).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=9103966; PubMed=1368571;
RA Kato H., Okoshi A., Mura Y., Noguchi T.;
RT "A new cDNA clone relating to larger molecular species of rat insulin-
like growth factor-I mRNA.";
RL Agric. Biol. Chem. 54:1599-1601(1990).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; D00698; BAA00604.1; -.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; ILGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
PT CHAIN 23 92
SQ SEQUENCE 127 AA; 14106 MW; 104E126BCFCA5CB7 CRC64;

Query Match 36.5%; Score 31; DB 11; Length 127;
Best Local Similarity 100.0%; Pred. No. 5.3e-26;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 11 RRAPOGTGVDECCFRSCDLRLRYCAPLKP 41
DB 58 RRAPOGTGVDECCFRSCDLRLRYCAPLKP 88

RESULT 10
ID 08C4U6 PRELIMINARY; PRT; 153 AA.
AC 08C4U6;
DT 01-MAR-2003 (TREMBlrel. 23, Created)
DT 01-MAR-2003 (TREMBlrel. 23, Last sequence update)
DE Unknown EST.
GN C730016P09RIK.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=C57BL/6J; TISSUE=Cerebellum;
RX MEDLINE=22354683; PubMed=12466851;
RA The FANTOM Consortium.
RA the RIKEN Genome Exploration Research Group Phase I & II Team;
RT "Analysis of the mouse transcriptome based on functional annotation of
60,770 full-length cDNAs.";
RL Nature 420:563-573(2002).

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DR EMBL; AK081019; BAC38117.1; -.
DR MGD; MGI:2444166; C730016P09RIK.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; ILGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
SQ SEQUENCE 153 AA; 17093 MW; 967596A8AC0CA387 CRC64;

Query Match 36.5%; Score 31; DB 11; Length 153;
Best Local Similarity 100.0%; Pred. No. 6.2e-26;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 11 RRAPOGTGVDECCFRSCDLRLRYCAPLKP 41
DB 84 RRAPOGTGVDECCFRSCDLRLRYCAPLKP 114

RESULT 11
ID 08CAR0 PRELIMINARY; PRT; 165 AA.
AC 08CAR0;
DT 01-MAR-2003 (TREMBlrel. 23, Created)
DT 01-MAR-2003 (TREMBlrel. 23, Last sequence update)
DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
DE Unknown EST.
GN C730016P09RIK.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=C57BL/6J; TISSUE=Thymus;
RX MEDLINE=22354683; PubMed=12466851;
RA The FANTOM Consortium.
RA the RIKEN Genome Exploration Research Group Phase I & II Team;
RT "Analysis of the mouse transcriptome based on functional annotation of
60,770 full-length cDNAs.";
RL Nature 420:563-573(2002).
DR EMBL; AK081119; BAC29934.1; -.
DR MGD; MGI:2444166; C730016P09RIK.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; ILGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
SQ SEQUENCE 165 AA; 18473 MW; 2CE0D3DA981C93F8 CRC64;

Query Match 36.5%; Score 31; DB 11; Length 165;
Best Local Similarity 100.0%; Pred. No. 6.6e-26;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 11 RRAPOGTGVDECCFRSCDLRLRYCAPLKP 41
DB 68 RRAPOGTGVDECCFRSCDLRLRYCAPLKP 98

RESULT 12
ID 093380 PRELIMINARY; PRT; 153 AA.
AC 093380;
DT 01-NOV-1998 (TREMBlrel. 08, Created)
DT 01-NOV-1998 (TREMBlrel. 08, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor-I precursor.
GN IGFI.

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FT  NON TER      1      1
RT  NON TER      108    108
SQ  SEQUENCE      108 AA; 11768 MW; 7B9466A89CC569A8 CRC64;

Query Match
Best Local Similarity 15.3%; Score 13; DB 13; Length 108;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY  45 ARSVRAQRHTDMP 57
    |||||
    88 ARSVRAQRHTDMP 100

RESULT 16
ID  Q800M8      PRELIMINARY; PRT; 108 AA.
AC  Q800M8;
DT  01-JUN-2003 (TRENBLREL. 24, Created)
DT  01-JUN-2003 (TRENBLREL. 24, Last sequence update)
DE  01-OCT-2003 (TRENBLREL. 25, Last annotation update)
DE  Insulin-like growth factor I (Fragment).
OS  Morone chrysops (White base).
OC  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC  Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC  Acanthomorpha; Acanthopterygii; Perciformes; Percoidae;
OC  Moronidae; Morone.
OX  NCBI_TaxID=46259;
RN  [1]
RP  SEQUENCE FROM N.A.
RA  Fruchtmann S., Hawkins M.B., Borski R.J.;
RT  "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
RT  bass species."
RL  Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
DR  EMBL; AF402671; AAC73856.1; -.
DR  GO; GO:0005576; C:extracellular; IEA.
DR  GO; GO:0005179; F:hormone activity; IEA.
DR  GO; GO:0007582; P:physiological processes; IEA.
DR  InterPro; IPR004825; Ins/IGF/relax.
DR  Pfam; PF00049; Insulin; 1.
DR  PRINTS; PR00277; INSULINB.
DR  ProDom; PD015667; Mollusc_ins; 1.
DR  SMART; SM00078; IIGF; 1.
DR  PROSITE; PS00262; INSULIN; 1.
FT  NON TER      1      1
FT  NON TER      108    108
SQ  SEQUENCE      108 AA; 11768 MW; 7B9466A89CC569A8 CRC64;

Query Match
Best Local Similarity 15.3%; Score 13; DB 13; Length 108;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY  45 ARSVRAQRHTDMP 57
    |||||
    88 ARSVRAQRHTDMP 100

RESULT 17
ID  Q800M7      PRELIMINARY; PRT; 108 AA.
AC  Q800M7;
DT  01-JUN-2003 (TRENBLREL. 24, Created)
DT  01-JUN-2003 (TRENBLREL. 24, Last sequence update)
DE  01-OCT-2003 (TRENBLREL. 25, Last annotation update)
DE  Insulin-like growth factor I (Fragment).
OS  Morone americana (White perch).
OC  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC  Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC  Acanthomorpha; Acanthopterygii; Perciformes; Percoidae;
OC  Moronidae; Morone.
OX  NCBI_TaxID=46260;
RN  [1]
RP  SEQUENCE FROM N.A.

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RA  Fruchtmann S., Hawkins M.B., Borski R.J.;
RT  "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
RT  bass species."
RL  Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
DR  EMBL; AF402672; AAC73857.1; -.
DR  GO; GO:0005576; C:extracellular; IEA.
DR  GO; GO:0005179; F:hormone activity; IEA.
DR  GO; GO:0007582; P:physiological processes; IEA.
DR  InterPro; IPR004825; Ins/IGF/relax.
DR  Pfam; PF00049; Insulin; 1.
DR  PRINTS; PR00277; INSULINB.
DR  ProDom; PD015667; Mollusc_ins; 1.
DR  SMART; SM00078; IIGF; 1.
DR  PROSITE; PS00262; INSULIN; 1.
FT  NON TER      1      1
FT  NON TER      108    108
SQ  SEQUENCE      108 AA; 11768 MW; 7B9466A89CC569A8 CRC64;

Query Match
Best Local Similarity 15.3%; Score 13; DB 13; Length 108;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY  45 ARSVRAQRHTDMP 57
    |||||
    88 ARSVRAQRHTDMP 100

RESULT 18
ID  Q91161      PRELIMINARY; PRT; 116 AA.
AC  Q91161;
DT  01-NOV-1996 (TRENBLREL. 01, Created)
DT  01-NOV-1996 (TRENBLREL. 01, Last sequence update)
DE  01-JUN-2003 (TRENBLREL. 24, Last annotation update)
DE  Insulin-like growth factor I precursor (Fragment).
OS  Oncorhynchus kisutch (Coho salmon).
OC  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC  Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC  Proactinopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX  NCBI_TaxID=8019;
RN  [1]
RP  SEQUENCE FROM N.A.
RA  Tissue=Liver;
RC  Tissue=Liver;
RX  MEDLINE=90190659; PubMed=2628735;
RA  Cao Q.P., Duguay S.J., Piletskaya E., Steiner D.F., Chan S.J.;
RT  "Nucleotide sequence and growth hormone regulated expression of salmon
RT  insulin-like growth factor I mRNA."
RL  Mol. Endocrinol. 3:2005-2010(1989).
RN  [2]
RP  SEQUENCE FROM N.A.
RA  Tissue=Liver;
RC  Tissue=Liver;
RX  MEDLINE=93024477; PubMed=1406698;
RA  Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
RT  "Nucleotide sequence and tissue distribution of three insulin-like
RT  growth factor I promoters in salmon."
RL  Mol. Endocrinol. 6:1202-1210(1992).
CC  -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC  -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR  EMBL; M81911; AAB59947.1; -.
DR  HSSP; P01343; ZGFL.
DR  GO; GO:0005576; C:extracellular; IEA.
DR  GO; GO:0005179; F:hormone activity; IEA.
DR  GO; GO:0007582; P:physiological processes; IEA.
DR  InterPro; IPR004825; Ins/IGF/relax.
DR  Pfam; PF00049; Insulin; 1.
DR  PRINTS; PR00277; INSULINB.
DR  SMART; SM00078; IIGF; 1.
DR  PROSITE; PS00262; INSULIN; 1.
KM  Signal..
FT  NON TER      1      1
FT  SIGNAL      <1    18      POTENTIAL.
FT  CHAIN       19    >88      INSULIN-LIKE GROWTH FACTOR I.

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FT NON TER 116 116
SQ SEQUENCE 116 AA, 12697 MW; CSF378915179D89D CRC64;
Query Match
Best Local Similarity 15.3%; Score 13; DB 13; Length 116;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
DB 88 ARSVRAQRHTDMP 100

RESULT 19
Q91476 PRELIMINARY; PRT; 117 AA.
AC Q91476;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor I precursor (Fragment).
OS Salmo salar (Atlantic salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
OC NCBI_TaxID=8030;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=93024477; PubMed=1406698;
RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
RT "Nucleotide sequence and tissue distribution of three insulin-like
RT growth factor I prohormones in salmon.";
RL Mol. Endocrinol. 6:1202-1210(1992).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; M81904; AAA1821.1; -.
DR HSP; P01343; ZGPI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Signal.
FT NON TER 1 1
FT SIGNAL <1 18 POTENTIAL.
FT CHAIN 19 88 INSULIN-LIKE GROWTH FACTOR I.
SQ SEQUENCE 117 AA; 12867 MW; A97666E32F526EAC CRC64;

Query Match
Best Local Similarity 15.3%; Score 13; DB 13; Length 117;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
DB 88 ARSVRAQRHTDMP 100

RESULT 20
Q91475 PRELIMINARY; PRT; 145 AA.
AC Q91475;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor I precursor (Fragment).
OS Salmo salar (Atlantic salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
OC NCBI_TaxID=8030;

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RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=93024477; PubMed=1406698;
RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
RT "Nucleotide sequence and tissue distribution of three insulin-like
RT growth factor I prohormones in salmon.";
RL Mol. Endocrinol. 6:1202-1210(1992).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; M81904; AAA1821.1; -.
DR HSP; P01343; ZGPI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Signal.
FT NON TER 1 1
FT SIGNAL <1 18 POTENTIAL.
FT CHAIN 19 88 INSULIN-LIKE GROWTH FACTOR I.
FT NON TER 145 145
SQ SEQUENCE 145 AA; 15885 MW; 3D94BDF477268FC4 CRC64;

Query Match
Best Local Similarity 15.3%; Score 13; DB 13; Length 145;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
DB 88 ARSVRAQRHTDMP 100

RESULT 21
Q91231 PRELIMINARY; PRT; 149 AA.
AC Q91231;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor-I.
GN IGF-I.
OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OC NCBI_TaxID=74940;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Big Quailicum River; TISSUE=Liver;
RX MEDLINE=93247592; PubMed=7683374;
RA Wallis A.B., Devlin R.H.;
RT "Duplicate insulin-like growth factor-I genes in salmon display
RT alternative splicing pathways.";
RL Mol. Endocrinol. 7:409-422(1993).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=Big Quailicum River; TISSUE=Liver;
RA Devlin R.H.;
RT Submitted (OCT-1994) to the EMBL/GenBank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; U15962; AAA67268.1; -.
DR PIR; D54270; D54270.
DR HSP; P01343; ZGPI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.

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DR PRINTS: PRO0277; INSULIN.

DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
SQ SEQUENCE 149 AA; 16507 MW; 9AC8F072762D2AA0 CRC64;

Query Match 15.3%; Score 13; DB 13; Length 149;
Best Local Similarity 100.0%; Pred. No. 4e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
DB 114 ARSVRAQRHTDMP 126

RESULT 22

Q91162 PRELIMINARY; PRT; 155 AA.

AC Q91162; PRELIMINARY; PRT; 155 AA.
DT 01-NOV-1996 (TREMblrel. 01, Created)
DT 01-NOV-1996 (TREMblrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMblrel. 24, Last annotation update)
DE Insulin-like growth factor I precursor (Fragment).
OS Oncorhynchus kisutch (Coho salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Proteocephali; Neopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_Taxid=8019;

RP SEQUENCE FROM N.A.
RA TISSUE=Liver;
RA MEDLINE=90190659; PubMed=2628735;
RA Cao Q.P., Duguay S.J., Pilsetskaya E., Steiner D.F., Chan S.J.;
RT "Nucleotide sequence and growth hormone regulated expression of salmon
insulin-like growth factor I mRNA."
RL Mol. Endocrinol. 3:2005-2010(1989).
RN [2]
RP SEQUENCE FROM N.A.

RC TISSUE=Liver;
RX MEDLINE=93024477; PubMed=1406698;
RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
RT "Nucleotide sequence and tissue distribution of three insulin-like
growth factor I prohormones in salmon."
RL Mol. Endocrinol. 6:1202-1210(1992).
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; M81913; AAA49413.1; -.
DR HSSP; P01343; C44012.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; F:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PRO0277; INSULIN.

DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Signal.
KW NON_TER
FT SIGNAL 1 1
FT CHAIN <1 18 POTENTIAL.
FT CONFLICT 73 73 INSULIN-LIKE GROWTH FACTOR I.
FT NON_TER 155 155 R -> X (IN REF. 1).
SQ SEQUENCE 155 AA; 16968 MW; 022FD3CA39CA3160 CRC64;

Query Match 15.3%; Score 13; DB 13; Length 155;
Best Local Similarity 100.0%; Pred. No. 4.1e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
DB 88 ARSVRAQRHTDMP 100

RESULT 23

Q93607 PRELIMINARY; PRT; 159 AA.

AC Q93607; PRELIMINARY; PRT; 159 AA.
DT 01-NOV-1998 (TREMblrel. 08, Created)
DT 01-NOV-1998 (TREMblrel. 08, Last sequence update)
DT 01-JUN-2003 (TREMblrel. 24, Last annotation update)
DE Preproinsulin-like growth factor Ia.
GN IGF-1.
OS Parachanna olivacea (Flounder).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC Acanthomorpha; Acanthopterygii; Percormorpha; Pluonectiformes;
OC Pluonectoidae; Parachannidae; Parachannys.
NCBI_Taxid=8255;

RP SEQUENCE FROM N.A.
RA Kim D.S.;
RT "Expression of IGF-1b cDNA clone isolated from Parachannys olivacea
in mammalian CHO cell line using green fluorescence protein (GFP)
tagging: secretory production of big IGF1b-GFP fusion proteins from
stable transfected CHO cell culture."
RL Submitted (AUG-1998) to the EMBL/GenBank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; A010602; CAA09267.1; -.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; F:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PRO0277; INSULIN.

DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
SQ SEQUENCE 159 AA; 17541 MW; 8B61DC89831E0865 CRC64;

Query Match 15.3%; Score 13; DB 13; Length 159;
Best Local Similarity 100.0%; Pred. No. 4.2e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
DB 112 ARSVRAQRHTDMP 124

Q91230 PRELIMINARY; PRT; 161 AA.

AC Q91230; PRELIMINARY; PRT; 161 AA.
DT 01-NOV-1996 (TREMblrel. 01, Created)
DT 01-NOV-1996 (TREMblrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMblrel. 24, Last annotation update)
DE Insulin-like growth factor-I.
GN IGF-1.

OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Proteocephali; Neopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
NCBI_Taxid=74940;
RN [1]
RP SEQUENCE FROM N.A.
RA STRAIN=Big Qualicum River; TISSUE=Liver;
RX MEDLINE=93247592; PubMed=7683374;
RA Wallis A.E., Devlin R.H.;
RT "Duplicate insulin-like growth factor-I genes in salmon display
alternative splicing pathways."
RL Mol. Endocrinol. 7:409-422(1993).

QY 45 ARSVRAQRHTDMP 57
DB 121 ARSVRAQRHTDMP 124
RP SEQUENCE FROM N.A.
RA STRAIN=Big Qualicum River; TISSUE=Liver;
RA Devlin R.H.;
RL Submitted (OCT-1994) to the EMBL/GenBank/DBJ databases.

CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; U15961; AAA67267.1; -.
 DR PIR; C54270; C54270.
 DR HSSP; P01343; 2GFL.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; I.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 SQ SEQUENCE 161 AA; 1763 MW; A5A85D12137BF67 CRC64;

Query Match 15.3%; Score 13; DB 13; Length 161;
 Best Local Similarity 100.0%; Pred. No. 4.3e-06;
 Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
 |||||
 DB 114 ARSVRAQRHTDMP 126

RESULT 25
 ID 057436 PRELIMINARY; PRT; 185 AA.
 AC 057436;
 DT 01-JUN-1998 (TrEMBLrel. 06, Created)
 DT 01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Insulin-like growth factor I.
 GN IGF-1.
 OS Paratichthys olivaceus (Flounder).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Notoleosteii;
 OC Acanthomorpha; Acanthopterygii; Perciformes; Pleuronectiformes;
 OC Pleuronectoidae; Paratichthyidae; Paratichthys.
 OC NCBI_TaxID=8255;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Kim S.-H., Kim K.-S., Nam T.-J., Lee Y.-C.;
 RT "Molecular cloning and expression of insulin-like growth factor I cDNA
 from flounder liver".
 RL Submitted (Aug-1997) to the EMBL/GenBank/DBJ databases.
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; AF016922; AAB94052.1; -.
 DR HSSP; P01343; 2GFL.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; I.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 SQ SEQUENCE 185 AA; 20414 MW; 8A898369D567BB3 CRC64;

Query Match 15.3%; Score 13; DB 13; Length 185;
 Best Local Similarity 100.0%; Pred. No. 4.8e-06;
 Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
 |||||
 DB 112 ARSVRAQRHTDMP 124

Search completed: March 3, 2004, 11:54:41
 Job time : 41 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 11:15:19 ; Search time 14 Seconds
(without alignments)
316.140 Million cell updates/sec

Title: US-09-852-261-2_COPY_26_110

Perfect score: 85
Sequence: 1 NKPVGSSSRRAAPQGTIVD.....STNKNTKSGRRKSGTFEEHK 85

Scoring table: OLIGO
Gapop 60.0 , Gapext 60.0

Searched: 141681 seqs, 52070155 residues

Word size : 0

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Listing first 100 summaries

Database : SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length	ID	Description
1	78	91.8	195 1	IGFB_HUMAN
2	61	71.8	130 1	IGF1_CAVPO
3	61	71.8	153 1	IGFA_HUMAN
4	58	68.2	122 1	IGF1_CANPA
5	58	68.2	153 1	IGF1_PIG
6	58	68.2	154 1	IGF1_BOVIN
7	49	57.6	122 1	IGF1_HORSE
8	43	50.6	81 1	IGF1_SUNMU
9	43	50.6	143 1	IGF1_RABIT
10	41	48.2	154 1	IGF1_RABIT
11	40	47.1	154 1	IGF1_SHEEP
12	31	36.5	127 1	IGFA_MOUSE
13	31	36.5	133 1	IGFB_MOUSE
14	31	36.5	153 1	IGFA_RAT
15	31	36.5	181 1	IGFB_RAT
16	19	22.4	153 1	IGF1_XENLA
17	16	18.8	124 1	IGF1_COTUA
18	16	18.8	153 1	IGF1_CHICK
19	13	15.3	176 1	IGF1_ONCKI
20	13	15.3	176 1	IGF1_ONCKI
21	10	11.8	161 1	IGFA_CYPCA
22	10	11.8	161 1	IGFB_CYPCA
23	9	10.6	66 1	IGF2_CHICK
24	9	10.6	128 1	IGF2_CAVPO
25	9	10.6	129 1	IGF2_MUSVI
26	9	10.6	155 1	IGF2_BOVIN
27	9	10.6	179 1	IGF2_SHEEP
28	9	10.6	180 1	IGF2_HUMAN
29	9	10.6	180 1	IGF2_MOUSE
30	9	10.6	180 1	IGF2_RAT
31	9	10.6	181 1	IGF2_HORSE
32	9	10.6	181 1	IGF2_PIG
33	9	10.6	214 1	IGF2_ONCKY

34	7	8.2	87	1	BXA_BOMMO	017194 bombyx mori
35	7	8.2	88	1	BXB_BOMMO	P26742 bombyx mori
36	7	8.2	89	1	BXA2_BOMMO	P15411 bombyx mori
37	7	8.2	89	1	BXA2_BOMMO	P26731 bombyx mori
38	7	8.2	89	1	BXB1_BOMMO	P26733 bombyx mori
39	7	8.2	89	1	BXB2_BOMMO	P26734 bombyx mori
40	7	8.2	90	1	BXB3_BOMMO	P26737 bombyx mori
41	7	8.2	90	1	BXB4_BOMMO	P26738 bombyx mori
42	7	8.2	90	1	BXB5_BOMMO	P26739 bombyx mori
43	7	8.2	90	1	BXB6_BOMMO	P26740 bombyx mori
44	7	8.2	90	1	BXB7_BOMMO	P26741 bombyx mori
45	7	8.2	90	1	BXB9_BOMMO	P26743 bombyx mori
46	7	8.2	91	1	BXC1_BOMMO	P15410 bombyx mori
47	7	8.2	92	1	BXA1_BOMMO	017192 bombyx mori
48	7	8.2	92	1	BXA3_BOMMO	P26726 bombyx mori
49	7	8.2	92	1	BXA4_BOMMO	P26727 bombyx mori
50	7	8.2	92	1	BXA5_BOMMO	P26728 bombyx mori
51	7	8.2	92	1	BXA6_BOMMO	P26729 bombyx mori
52	7	8.2	92	1	BXA7_BOMMO	P26730 bombyx mori
53	7	8.2	92	1	BXA9_BOMMO	P26732 bombyx mori
54	7	8.2	93	1	BXB8_BOMMO	017196 bombyx mori
55	7	8.2	95	1	BXC2_BOMMO	P26735 bombyx mori
56	7	8.2	186	1	R1U7_NEUCR	Q9ne25 neurospora
57	7	8.2	187	1	GRPE_BORBU	P28609 borrella bu
58	7	8.2	235	1	KPY1_PHOLE	Q30853 photobacter
59	7	8.2	327	1	GYRA_MYCXE	P72065 mycobacteri
60	7	8.2	345	1	YG3V_YEAST	P53292 saccharomyc
61	7	8.2	549	1	GYRA_MYCCA	Q49608 mycobacteri
62	7	8.2	550	1	GYRA_MYCCV	Q49467 mycobacteri
63	7	8.2	554	1	GYRA_MYCTU	Q49166 mycobacteri
64	7	8.2	838	1	GYRA_MYCSM	Q07702 mycobacteri
65	7	8.2	842	1	GYRA_MYCLE	P46354 mycobacteri
66	7	8.2	1273	1	BXEC_BOMMO	Q57532 mycobacteri
67	6	7.1	90	1	SELK_MOUSE	P29519 bombyx mori
68	6	7.1	94	1	RS13_SYNP6	Q91111 mus musculu
69	6	7.1	125	1	RS13_SYNP6	Q24708 synechococc
70	6	7.1	126	1	RS13_ANASP	Q8YFK1 arabidena sp
71	6	7.1	126	1	RS13_SYNBL	Q8dm11 synechococc
72	6	7.1	132	1	YB12_STRCI	P33654 streptomyce
73	6	7.1	139	1	IGF MYXL	P22618 myxine glut
74	6	7.1	159	1	Y39J_METKA	P58829 methanopyru
75	6	7.1	165	1	TBP_CERSY	Q74045 cenarchaeum
76	6	7.1	182	1	HANI_STAMM	Q94UV5 staphylococ
77	6	7.1	195	1	RS4_NEIMA	P58995 staphylococ
78	6	7.1	195	1	RS4_NEIMA	Q91r90 neisseria m
79	6	7.1	206	1	RS4_PSEAE	O52759 pseudomonas
80	6	7.1	207	1	RR4_PROWI	O47032 proteobaca
81	6	7.1	220	1	KCY_THEMA	Q941f6 thermotoga
82	6	7.1	222	1	KCY_HAETN	P47893 haemophilus
83	6	7.1	223	1	KCY_XYLFU	Q9p4g6 xyella fas
84	6	7.1	223	1	KCY_XYLFU	Q87b56 xyella fas
85	6	7.1	227	1	KCY_PASMT	P57875 pasteurella
86	6	7.1	228	1	KCY_PSEAP	Q8m0c4 pseudomonas
87	6	7.1	229	1	KCY_PSEAP	Q8m0c4 pseudomonas
88	6	7.1	229	1	KCY_PSEAP	Q91z70 pseudomonas
89	6	7.1	229	1	KCY_PSEAP	Q885t2 pseudomonas
90	6	7.1	230	1	RS1_NEIMA	Q91g92 neisseria m
91	6	7.1	231	1	KCY1_HAETN	P47892 haemophilus
92	6	7.1	236	1	TL17_ARATH	P81760 arabidopsis
93	6	7.1	247	1	NUKC_TOBAC	P06409 nicotiana t
94	6	7.1	262	1	YF14_MYCTU	P71793 mycobacteri
95	6	7.1	271	1	TRMB_CAUCR	P58088 caulobacter
96	6	7.1	273	1	EXB2_ARATH	Q99hy6 arabidopsis
97	6	7.1	273	1	EXB2_ARATH	P15346 equine herp
98	6	7.1	273	1	EXB2_ARATH	P25259 hepetosiph
99	6	7.1	274	1	EXB2_ARATH	P25257 hepetosiph
100	6	7.1	274	1	EXB2_ARATH	P25260 herpetosiph

ALIGNMENTS

RESULT 1

```

IGFB_HUMAN          STANDARD;          PRT;          195 AA.
ID   IGFB_HUMAN
AC   P05019
DT   13-AUG-1987 (Rel. 05, Created)
DT   13-AUG-1987 (Rel. 05, Last sequence update)
DT   10-OCT-2003 (Rel. 42, Last annotation update)
DE   Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C).
GN   IGF1 OR IBP1.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   MEDLINE=86168194; PubMed=2937782;
RA   Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
RT   "Organization and sequence of the human insulin-like growth factor I
RT   gene. Alternative RNA processing produces two insulin-like growth
RT   factor I precursor peptides."
RL   J. Biol. Chem. 261:4828-4832(1986).
RN   [2]
RP   SEQUENCE FROM N.A.
RA   MEDLINE=86094355; PubMed=3455760;
RA   Rotwein P.;
RT   "Two insulin-like growth factor I messenger RNAs are expressed in
RT   human liver."
RL   Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).
RN   [3]
RP   SEQUENCE FROM N.A.
RA   MEDLINE=86108862; PubMed=3002851;
RA   van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
RT   "Organization of the human genes for insulin-like growth factors I
RT   and II."
RL   FEBS Lett. 195:179-184(1986).
RN   [4]
RP   SEQUENCE OF 22-50 FROM N.A.
RA   MEDLINE=84295593; PubMed=6382022;
RA   Dull T.J., Gray A., Hayflick J.S., Ulrich A.;
RT   "Insulin-like growth factor II precursor gene organization in
RT   relation to insulin gene family."
RL   Nature 310:777-781(1984).
RN   [5]
RP   SEQUENCE OF 49-118.
RA   MEDLINE=78130171; PubMed=632300;
RA   Rinderknecht E., Humbel R.E.;
RT   "The amino acid sequence of human insulin-like growth factor I and
RT   its structural homology with proinsulin."
RL   J. Biol. Chem. 253:2769-2776(1978).
RN   [6]
RP   3D-STRUCTURE MODELING.
RA   MEDLINE=83210259; PubMed=6189745;
RA   Blundell T.L., Bedaride S., Humbel R.E.;
RT   "Tertiary structures, receptor binding, and antigenicity of
RT   insulinlike growth factors."
RL   Fed. Proc. 42:2592-2597(1983).
RN   [7]
RP   STRUCTURE BY NMR.
RA   MEDLINE=91242464; PubMed=2036417;
RA   Cooke R.M., Harvey T.S., Campbell I.D.;
RT   "Solution structure of human insulin-like growth factor I: a nuclear
RT   magnetic resonance and restrained molecular dynamics study."
RL   Biochemistry 30:5484-5491(1991).
RN   [8]
RP   STRUCTURE BY NMR.
RA   MEDLINE=92319903; PubMed=3319992;
RA   Sato A., Nishimura S., Okubo T., Kyogoku Y., Koyama S., Kobayashi M.,
RA   Yaeuda T., Kobayashi Y.;
RT   "1H-NMR assignment and secondary structure of human insulin-like
RT   growth factor-I (IGF-I) in solution."
RL   J. Biochem. 111:529-536(1992).
RN   [9]
RP   DISULFIDE BONDS.
RX   MEDLINE=89207850; PubMed=3242681;
RX   Raschdorf F., Dahinden R., Maerki W., Richer W.J., Merryweather J.P.;
RT   "Location of disulphide bonds in human insulin-like growth factors
RT   (IGFs) synthesized by recombinant DNA technology."
RL   Biomed. Environ. Mass Spectrom. 16:3-8(1986).
RN   [10]
RP   VARIANT ASP-187.
RA   MEDLINE=99318093; PubMed=10391209;
RA   Cargill M., Altschuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
RA   Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nimesh U., Ziaugra L.,
RA   Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.O.;
RA   Lander E.S.;
RT   "Characterization of single-nucleotide polymorphisms in coding regions
RT   of human genes."
RL   Nat. Genet. 22:231-238(1999).
RN   [11]
RP   ERRATUM.
RA   Cargill M., Altschuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
RA   Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nimesh U., Ziaugra L.,
RA   Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.O.,
RA   Lander E.S.;
RL   Nat. Genet. 23:373-373(1999).
CC   -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC   are structurally and functionally related to insulin but have a
CC   much higher growth-promoting activity.
CC   -1- SUBCELLULAR LOCATION: Secreted.
CC   -1- ALTERNATIVE PRODUCTS:
CC   Event=Alternative splicing; Named isoforms=2;
CC   Name=IGF-1A;
CC   IsoId=P05019-1; Sequence=Displayed;
CC   Name=IGF-1B;
CC   IsoId=P01343-1; Sequence=External;
CC   -1- SIMILARITY: Belongs to the insulin family.
CC   -----
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (see http://www.ebi.ac.uk/announcements
CC   or send an email to license@ebi.ac.uk).
CC   -----
DR   EMBL, M14155; AAA52537.1; -.
DR   EMBL, M12659; AAA52537.1; JOINED.
DR   EMBL, M14153; AAA52537.1; JOINED.
DR   EMBL, M14154; AAA52537.1; JOINED.
DR   EMBL, M11568; AAA52539.1; -.
DR   EMBL, X03563; CAA27250.1; -.
DR   EMBL, X03420; CAA27152.1; -.
DR   EMBL, X03421; CAA27153.1; -.
DR   EMBL, X03422; CAA27154.1; -.
DR   PIR, A01611; IGH01B.
DR   PDB, 1GF1; 15-OCT-94.
DR   PDB, 2GF1; 15-APR-93.
DR   PDB, 3GF1; 15-APR-93.
DR   PDB, 1BOT; 18-MAY-99.
DR   Genem: HGNC:5464; IGF1.
DR   MIM, 147440; -.
DR   MIM, 265850; -.
DR   GO, GO:0005159; F:insulin-like growth factor receptor binding; TAS.
DR   GO, GO:0005180; F:peptide hormone; TAS.
DR   GO, GO:0006928; F:cell motility; TAS.
DR   GO, GO:0006260; F:DNA replication; TAS.
DR   GO, GO:0009441; F:glycolate metabolism; TAS.
DR   GO, GO:0007517; P:muscle development; TAS.
DR   GO, GO:0008284; P:positive regulation of cell proliferation; TAS.
DR   GO, GO:0007265; P:Ras protein signal transduction; TAS.
DR   GO, GO:0007165; P:signal transduction; TAS.
DR   GO, GO:0001501; P:skeletal development; TAS.
DR   InterPro: IPR004825; Ins/IGF/relax.
DR   Pfam: PF00049; Insulin; 1.
DR   PRINTS: PR00277; INSULINB.
DR   SMART; SM00078; IIGF_1.

```

DR PROSITE, PS00262; INSULIN, 1.
 KW Insulin family; Growth factor; 3D-structure; Plasma;
 KN Alternative splicing; Signal; Polymorphism.
 FT SIGNAL 1 21
 FT PROPEP 22 48
 FT CHAIN 49 118
 FT DOMAIN 49 77
 FT DOMAIN 78 89
 FT DOMAIN 90 110
 FT DOMAIN 111 118
 FT PROPEP 119 195
 FT DISULFID 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT VARIANT 187 187
 FT STRAND 51 51
 FT TURN 55 55
 FT HELIX 56 69
 FT TURN 87 88
 FT HELIX 91 95
 FT TURN 96 97
 FT STRAND 99 99
 FT HELIX 106 109
 SQ SEQUENCE 195 AA; 21841 MW; E88A8CFBD1CD1873 CRC64;
 Query Match 91.8%; Score 78; DB 1; Length 195;
 Best Local Similarity 100.0%; Pred. No. 6.5e-75;
 Matches 78; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NKPTGYSSSRAPPTGIVDECCFSCDRLRLMVCAPLKPASRSVVAQSHDMPKQTQ 60
 DB 74 NKPTGYSSSRAPPTGIVDECCFSCDRLRLMVCAPLKPASRSVVAQSHDMPKQTQ 133
 QY 61 KYQPSINKNTKSCRRKG 78
 DB 134 KYQPSINKNTKSCRRKG 151
 RESULT 2
 IGFI_CAVPO STANDARD; PRT; 130 AA.
 ID IGFI_CAVPO
 AC P17647;
 DT 01-AUG-1990 (Rel. 15; Created)
 DT 01-AUG-1990 (Rel. 15; Last sequence update)
 DT 10-OCT-2003 (Rel. 42; Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGFI.
 OS Cavia porcellus (Guinea pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Rodentia; Hystriognathu; Cavidae; Cavia.
 OX NCBI_TaxID=10141;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX TISSUE=Pancreas;
 MEDLINE=90332447; PubMed=2377460;
 RA Bell G.I., Stempien M.M., Fong N.M., Scino S.;
 RT "Sequence of a cDNA encoding guinea pig IGF-I";
 RL Nucleic Acids Res. 18:4275-4275 (1990).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 are structurally and functionally related to insulin but have a
 much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC or send an email to license@isb-sib.ch).
 CC -----

DR EMBL, X52951; CAA37127.1; --
 DR PIR, S12719; IGFI.
 DR HSSP, P01343; IGFI.
 DR InterPro, IPR004825; Ins/IGF/relax.
 DR Pfam, PF00049; Insulin; 1.
 DR PRINTS, PRO0277; INSULIN.
 DR SMART, SM00078; IIGF; 1.
 DR PROSITE, PS00262; INSULIN, 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 25
 FT CHAIN 26 95
 FT DOMAIN 26 54
 FT DOMAIN 55 66
 FT DOMAIN 67 87
 FT DOMAIN 88 95
 FT PROPEP 96 130
 FT DISULFID 31 73
 FT DISULFID 43 86
 FT DISULFID 72 77
 SQ SEQUENCE 130 AA; 14342 MW; 251B20AEDC5729FF CRC64;
 Query Match 71.8%; Score 61; DB 1; Length 130;
 Best Local Similarity 100.0%; Pred. No. 3.8e-57;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NKPTGYSSSRAPPTGIVDECCFSCDRLRLMVCAPLKPASRSVVAQSHDMPKQTQ 60
 DB 51 NKPTGYSSSRAPPTGIVDECCFSCDRLRLMVCAPLKPASRSVVAQSHDMPKQTQ 110
 QY 61 K 61
 DB 111 K 111
 RESULT 3
 IGFI_HUMAN STANDARD; PRT; 153 AA.
 ID IGFI_HUMAN
 AC P01343;
 DT 21-JUL-1986 (Rel. 01; Created)
 DT 13-AUG-1987 (Rel. 05; Last sequence update)
 DT 10-OCT-2003 (Rel. 42; Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
 GN IGFI OR IBPI.
 OS Homo sapiens (human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86168194; PubMed=2937782;
 RA Retwein P., Pollock K.M., Didier D.K., Krivi G.G.;
 RT "Organization and sequence of the human insulin-like growth factor I
 RT gene. Alternative RNA processing produces two insulin-like growth
 RT factor I precursor peptides";
 RL J. Biol. Chem. 261:4828-4832 (1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=84068210; PubMed=6358902;
 RA Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.B.,
 RA Gabbay K.H., Niesbaum A.L., Sussenbach J.S., van den Brande J.L.;
 RT "Sequence of cDNA encoding human insulin-like growth factor I
 RT precursor";
 RL Nature 306:609-611 (1983).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86108910; PubMed=2935423;
 RA le Bouc Y., Dreyer D., Jaeger F., Binoux M., Sondermeyer P.;
 RT "Complete characterization of the human IGF-I nucleotide sequence
 RT isolated from a newly constructed adult liver cDNA library";
 RL FBS Lett. 196:108-112 (1986).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86108862; PubMed=3002851;

RA de Pagter-Holthuisen P., van Schaik F.M.A., Verdijn G.M.,
RA van Ommen G.J.B., Bouma B.N., Jansen M., Sussendbach J.S.,
RT "Organization of the human genes for insulin-like growth factors I
RT and II.";
RL FEBS Lett. 195:179-184(1986).
RN
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=91207342; PubMed=2018498;
RA Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M.,
RA Sussendbach J.S.;
RT "Complete nucleotide sequence of the high molecular weight human
RT IGF-I mRNA.";
RL Biochem. Biophys. Res. Commun. 175:507-514(1991).
RN
RN SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=92186627; PubMed=1372070;
RA Sandberg Nordqvist A.C., Stahlbom P.A., Lake M., Sara V.R.;
RT "Characterization of two cDNAs encoding insulin-like growth factor I
RT (IGF-I) in the human fetal brain.";
RL Brain Res. Mol. Brain Res. 12:275-277(1992).
RN
RN SEQUENCE OF 24-50 AND 119-153 FROM N.A.
RX MEDLINE=84295593; PubMed=6382022;
RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
RT "Insulin-like growth factor II precursor gene organization in
RT relation to insulin gene family.";
RL Nature 310:777-781(1984).
RN
RN SEQUENCE OF 49-118.
RX MEDLINE=78130171; PubMed=632300;
RA Rinderknecht E., Humbel R.E.;
RT "The amino acid sequence of human insulin-like growth factor I and
RT its structural homology with prolinsulin.";
RL J. Biol. Chem. 253:2766-2776(1978).
RN
RN 3D-STRUCTURE MODELING.
RX MEDLINE=83210259; PubMed=6189745;
RA Blundell T.L., Bedarke S., Humbel R.E.;
RT "Tertiary structures, receptor binding, and antigenicity of
RT insulinlike growth factors.";
RL Fed. Proc. 42:2592-2597(1983).
RN
RN STRUCTURE BY NMR.
RX MEDLINE=91242464; PubMed=2036417;
RA Cooke R.M., Harvey T.S., Campbell I.D.;
RT "Solution structure of human insulin-like growth factor I: a nuclear
RT magnetic resonance and restrained molecular dynamics study.";
RL Biochemistry 30:5484-5491(1991).
RN
RN STRUCTURE BY NMR.
RX MEDLINE=92316903; PubMed=1339992;
RA Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Koyama S., Kobayashi M.,
RA Yasuda T., Kobayashi Y.;
RT "1H-NMR assignment and secondary structure of human insulin-like
RT growth factor-I (IGF-I) in solution.";
RL J. Biochem. 111:529-536(1992).
RN
RN DISULFIDE BONDS.
RX MEDLINE=89207850; PubMed=3242681;
RA Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
RT "Location of disulphide bonds in human insulin-like growth factors
RT (IGFs) synthesized by recombinant DNA technology.";
RL Biomed. Environ. Mass Spectrom. 16:3-8(1988).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-1a;
CC IsoId=P01343-1; Sequence=Displayed;

CC Name=IGF-1b;
CC IsoId=P05019-1; Sequence=External;
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL, M14156; AAA52538.1; -. JOINED.
DR EMBL, M12659; AAA52538.1; JOINED.
DR EMBL, M14153; AAA52538.1; JOINED.
DR EMBL, M14154; AAA52538.1; JOINED.
DR EMBL, X00173; CAA24998.1; -. ALT_SEQ.
DR EMBL, M27544; AAA52787.1; -. ALT_SEQ.
DR EMBL, X03420; CAA27152.1; -. ALT_SEQ.
DR EMBL, X03421; CAA27153.1; -. ALT_SEQ.
DR EMBL, X03422; CAA27154.1; -. ALT_SEQ.
DR EMBL, X57025; CAA40342.1; -. ALT_SEQ.
DR EMBL, X56773; CAA40092.1; -. ALT_SEQ.
DR PIR, A92581; IGHU1.
DR PDB, 1GF1; 15-OCT-94.
DR PDB, 2GF1; 15-APR-93.
DR PDB, 3GF1; 15-APR-93.
DR PDB, 189G; 23-FEB-98.
DR PDB, 1GZK; 02-OCT-02.
DR PDB, 1GZY; 02-OCT-02.
DR PDB, 1GZ2; 25-JUL-02.
DR PDB, 1H02; 25-JUL-02.
DR PDB, 1H59; 16-MAY-02.
DR PDB, 1IWX; 03-OCT-01.
DR Genew; HGNC:5464; IGF1.
DR MIM, 147440; -.
DR GO; GO:0005159; P:insulin-like growth factor receptor binding; TAS.
DR GO; GO:0005180; P:peptide hormone; TAS.
DR GO; GO:0006928; P:cell motility; TAS.
DR GO; GO:0006260; P:DNA replication; TAS.
DR GO; GO:0009441; P:glycolate metabolism; TAS.
DR GO; GO:0007517; P:muscle development; TAS.
DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
DR GO; GO:0007265; P:RAS protein signal transduction; TAS.
DR GO; GO:0007165; P:signal transduction; TAS.
DR GO; GO:0001501; P:skeletal development; TAS.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin_1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF_1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; 3D-structure;
KW Alternative splicing; Signal.
FT SIGNAL 1 21 POTENTIAL.
FT PROPEP 22 48
FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR 1A.
FT DOMAIN 49 77 B.
FT DOMAIN 78 89 C.
FT DOMAIN 90 110 A.
FT DOMAIN 111 118 D.
FT PROPEP 119 153 E PEPTIDE.
FT DISULFID 54 96
FT DISULFID 66 109
FT DISULFID 95 100
FT STRAND 51 101
FT TURN 55 55
FT TURN 56 69
FT HELIX 87 88
FT HELIX 91 95
FT TURN 96 97
FT STRAND 99 99

FT HELIX 106 109
SQ SEQUENCE 153 AA; 17026 MW; C6ECD92DCA9B37BC CRC64;
Query Match 71.8%; Score 61; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 4,4e-57;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPASRSVRAQRHTDMPK 60
DB 74 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPASRSVRAQRHTDMPK 133
OY 61 K 61
DB 134 K 134

RESULT 4
IGF1_CANFA STANDARD; PRT; 122 AA.
ID IGF1_CANFA
AC P33712;
DT 01-FEB-1994 (Rel. 28, Created)
DT 01-FEB-1994 (Rel. 28, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin) (Fragment).
GN Canis familiaris (Dog).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX NCBI_TaxID=9615;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=93366192; PubMed=8359700;
RA Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
RT "Sequence of a cDNA encoding dog insulin-like growth factor I.";
RL Gene 130:305-306(1993).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
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CC EMBL, L08254; -; NOT ANNOTATED_CDS.
DR PIR, P06622; P06622.
DR HSRP, P01343; IGF1.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; INSULINB.
DR PRINTS, PR00277; INSULINB.
DR SMART, SM00078; IGF, 1.
DR PROSITE, PS00262; INSULIN; 1.
DR Insulin family; Growth factor; Plasma; signal.
FT SIGNAL 1
FT NON TER 1
FT CHAIN <1 19 BY SIMILARITY.
FT DOMAIN 20 89 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 20 48 B.
FT DOMAIN 49 60 A.
FT DOMAIN 61 81 C.
FT DOMAIN 82 89 A.
FT PROPEP 90 122 D. PEPTIDE.
FT DISULFID 25 67 E PEPTIDE.
FT DISULFID 37 80 BY SIMILARITY.
FT DISULFID 66 71 BY SIMILARITY.
SQ SEQUENCE 122 AA; 13407 MW; 036A004DC44E7D75 CRC64;

Query Match 68.2%; Score 58; DB 1; Length 122;

Best Local Similarity 100.0%; Pred. No. 5,2e-54;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPASRSVRAQRHTDMPK 58
DB 45 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPASRSVRAQRHTDMPK 102

RESULT 5
IGF1_PIG STANDARD; PRT; 153 AA.
ID IGF1_PIG
AC P16545;
DT 01-AUG-1990 (Rel. 15, Created)
DT 01-AUG-1990 (Rel. 15, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN Sus scrofa (Pig).
OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX NCBI_TaxID=9823;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=90221822; PubMed=2326169;
RA Mueller M., Brem G.;
RT "Nucleotide sequence of porcine insulin-like growth factor. 1:5' untranslated region, exons 1 and 2 and mRNA."
RL Nucleic Acids Res. 18:364-364(1990).
RN [2]
RP SEQUENCE OF 20-153 FROM N.A.
RX MEDLINE=8906956; PubMed=3211153;
RA Tavakkol A., Simmen F.A., Simmen R.C.M.;
RT "Porcine insulin-like growth factor-I (IGF-I): complementary deoxyribonucleic acid cloning and uterine expression of messenger ribonucleic acid encoding evolutionarily conserved IGF-I peptides."
RL Mol. Endocrinol. 2:674-681(1988).
RN [3]
RP SEQUENCE OF 1-21 FROM N.A.
RX STRAIN=White Landrace; TISSUE=Liver;
RX MEDLINE=94128209; PubMed=8297476;
RA Weller P.A., Dickson M.C., Hunkiss N.S., Dauncey M.J., Buttery P.J., Gilmore R.S.;
RT "The porcine insulin-like growth factor-I gene: characterization and expression of alternate transcription sites."
RL J. Mol. Endocrinol. 11:201-211(1993).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
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CC EMBL, X17492; CAA3527.1; -
DR EMBL, X52388; CAA3617.1; -
DR EMBL, X52077; CAA36296.1; -
DR EMBL, X51175; AAB1043.1; ALT_INIT.
DR EMBL, X17638; CAA35632.1; -
DR PIR, S12825; S12825.
DR HSRP, P01343; IGF1.
DR InterPro: IPR004825; Ins/IGF/relax.
DR Pfam: PF00049; Insulin; 1.
DR PRINTS, PR00277; INSULINB.
DR SMART, SM00078; IGF, 1.
DR PROSITE, PS00262; INSULIN; 1.
DR Insulin family; Growth factor; Plasma; signal.
FT SIGNAL 1

FT PROPEP ? 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E. PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 SO SEQUENCE 153 AA; 17010 MW; 6098792DCDA0CD7D CRC64;

Query Match 68.2%; Score 58; DB 1; Length 153;
 Best Local Similarity 100.0%; Pred. No. 6,4e-54;
 Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLKPASARSVAQRHTDMPK 58
 Db 74 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLKPASARSVAQRHTDMPK 131

RESULT 6
 ID IGFI_BOVIN STANDARD; PRT; 154 AA.
 AC P07455;
 DT 01-APR-1988 (Rel. 07, Created)
 DT 01-NOV-1991 (Rel. 20, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGFI.
 OS Bos taurus (Bovine).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Bovinae; Bos.
 CX NCBI_Taxid=9913;
 RN [1]
 RP SEQUENCE OF 2-154 FROM N.A.
 RX MEDLINE=90175014; PubMed=2308858;
 RA Forsis T., Murphy C., Gannon F.;
 RT "Nucleotide sequence of the bovine insulin-like growth factor I
 (IGF-I) and its IGF-I precursor";
 RL Nucleic Acids Res. 18:676-676(1990).

RN [2]
 RP SEQUENCE OF 50-119 FROM N.A.
 RX MEDLINE=95172127; PubMed=7867698;
 RA Schmidt A., Einspänner R., Amsegruber W., Sinowatz F., Schams D.;
 RT "Expression of insulin-like growth factor I (IGF-I) in the bovine
 RT oviduct during the oestrous cycle";
 RL Exp. Clin. Endocrinol. 102:364-369(1994).
 RN [3]
 RP SEQUENCE OF 50-119.
 RX MEDLINE=86085881; PubMed=3941093;
 RA Homegger A., Humbel R.E.;
 RT "Insulin-like growth factors I and II in fetal and adult bovine
 RT serum. Purification, primary structures, and immunological
 RT cross-reactivities";
 RL J. Biol. Chem. 261:569-575(1986).

RN [4]
 RP SEQUENCE OF 50-119.
 RX MEDLINE=88268820; PubMed=3390164;
 RA Francis G.L., Upton F.M., Ballard F.J., McNeill K.A., Wallace J.C.;
 RT "Insulin-like growth factors I and II in bovine colostrum. Sequences
 RT and biological activities compared with those of a potent truncated
 RT form";
 RL Biochem. J. 251:95-103(1988).

CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.

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DR EMBL: X15726; CA33746.1; -;
 DR EMBL: S76122; AAD14209.1; -;
 DR PIR: S12672; IGFI.
 DR HSSP: P01343; IGFI.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam: PF00049; Insulin; 1.
 DR PRINTS: PR00277; INSULIN.
 DR SMART: SM00078; IIGF; 1.
 DR PROSITE: PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.

FT SIGNAL 1 ? 49
 FT PROPEP ? 49
 FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 50 78 B.
 FT DOMAIN 79 90 C.
 FT DOMAIN 91 111 A.
 FT DOMAIN 112 119 D.
 FT PROPEP 120 154 E. PEPTIDE.
 FT DISULFID 55 97 BY SIMILARITY.
 FT DISULFID 67 110 BY SIMILARITY.
 FT DISULFID 96 101 BY SIMILARITY.
 SO SEQUENCE 154 AA; 17066 MW; 64201B6AF3140999 CRC64;

Query Match 68.2%; Score 58; DB 1; Length 154;
 Best Local Similarity 100.0%; Pred. No. 6,4e-54;
 Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLKPASARSVAQRHTDMPK 58
 Db 75 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLKPASARSVAQRHTDMPK 132

RESULT 7
 ID IGFI_HORSE STANDARD; PRT; 122 AA.
 AC P51458;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
 DE (Fragment).
 GN IGFI.
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
 CX NCBI_Taxid=9796;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX TISSUE=Liver;
 RX MEDLINE=97013467; PubMed=8860303;
 RA Ote K., Rozell B., Geesbo A., Engstrom W.;
 RT "Cloning and sequencing of an equine insulin-like growth factor I
 RT cDNA and its expression in fetal and adult tissues";
 RL Gen. Comp. Endocrinol. 102:11-15(1996).

CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.

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CC -----
DR EMBL; U28070; AAA68952.1; -.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 ?
FT PROPEP 1 48 BY SIMILARITY.
FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 49 77 B.
FT DOMAIN 78 89 C.
FT DOMAIN 90 110 A.
FT DOMAIN 111 118 D.
FT PROPEP 119 >122 E PEPTIDE.
FT DISULFID 54 96 BY SIMILARITY.
FT DISULFID 66 109 BY SIMILARITY.
FT DISULFID 95 100 BY SIMILARITY.
FT NON_TER 122 122
SQ SEQUENCE 122 AA; 13501 MW; 5A935B334435C9F9 CRC64;

```

Query Match 57.6%; Score 49; DB 1; Length 122;
 Best Local Similarity 100.0%; Pred. No. 1.6e-44;
 Matches 49; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

QY 1 NKPTGYSSRRAPQTGYDECCFRSCDRLRLMTCAPLKPAKRSVR 49
DB 74 NKPTGYSSRRAPQTGYDECCFRSCDRLRLMTCAPLKPAKRSVR 122

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RESULT 8

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IGF1_SUMMU
ID IGF1_SUMMU STANDARD; PRT; 81 AA.
AC Q28933;
DT 16-OCT-2001 (Rel. 40; Created)
DT 16-OCT-2001 (Rel. 40; Last sequence update)
DT 10-OCT-2003 (Rel. 42; Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
DE (Fragment).
GN IGF1.
OS Suncus murinus (House shrew) (Musk shrew).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Insectivora; Soricidae; Crocidurinae; Suncus.
OX NCBI_Taxid=9378;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=BA; and NAG; TISSUE=Liver;
RA Ishikawa A.;
RT "Partial sequence of a IGF-1 cDNA in the musk shrew, Suncus murinus."
RL Submitted (DEC-1994) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; D43957; BAA07897.1; -.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00276; INSULINA.
DR PRINTS; PR00277; INSULINB.
DR SMART; SMC0078; IGF; 1.

```

```

DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma.
FT NON_TER 1 1
FT PROPEP 1 4 BY SIMILARITY.
FT CHAIN 5 74 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 5 33 B.
FT DOMAIN 34 45 C.
FT DOMAIN 46 66 A.
FT DOMAIN 67 74 D.
FT PROPEP 75 >81 E PEPTIDE.
FT DISULFID 10 52 BY SIMILARITY.
FT DISULFID 22 65 BY SIMILARITY.
FT DISULFID 51 56 BY SIMILARITY.
FT NON_TER 81 81
SQ SEQUENCE 81 AA; 8869 MW; AC2C40972D05B3C4 CRC64;

```

Query Match 50.6%; Score 43; DB 1; Length 81;
 Best Local Similarity 100.0%; Pred. No. 2.4e-38;
 Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 1 NKPTGYSSRRAPQTGYDECCFRSCDRLRLMTCAPLKPAK 43
DB 30 NKPTGYSSRRAPQTGYDECCFRSCDRLRLMTCAPLKPAK 72

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RESULT 9

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IGF1_RABIT
ID IGF1_RABIT STANDARD; PRT; 143 AA.
AC Q95222; O18846;
DT 01-NOV-1997 (Rel. 35; Created)
DT 16-OCT-2001 (Rel. 40; Last sequence update)
DT 10-OCT-2003 (Rel. 42; Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1 OR IGF-1.
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_Taxid=9986;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORM IGF-1A).
RC STRAIN=ZIKKA.
RA Flekna G., Brem G., Mueller M.;
RL Submitted (NOV-1996) to the EMBL/GenBank/DBJ databases.
RN [2]
RP SEQUENCE FROM N.A. (ISOFORM IGF-1B).
RC STRAIN=ZIKKA; TISSUE=Liver;
RA Flekna G., Brem G., Mueller M.;
RL Submitted (SEP-1997) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- ALTERNATIVE PRODUCTS:
CC Name=IGF-1B;
CC IsoId=Q95222-1; Sequence=Displayed;
CC Name=IGF-1A;
CC IsoId=Q95222-2; Sequence=VSP_002705;
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; U75390; AAB48032.1; -.
DR EMBL; AF022861; AAB80550.1; -.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.

```

DR PRINTS; PRO0277; INSULIN.
 DR SMART; SMO0078; IGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KM Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
 FT SIGNAL 1 32
 FT CHAIN 33 102 POTENTIAL.
 FT PROPEP 103 143 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 33 61 E PEPTIDE.
 FT DOMAIN 62 73 B.
 FT DOMAIN 74 94 C.
 FT DOMAIN 95 102 A.
 FT DISULFID 38 80 D.
 FT DISULFID 50 93 BY SIMILARITY.
 FT DISULFID 79 84 BY SIMILARITY.
 FT VARSPLIC 119 143 YQPSSTNKKMSRRKSGSTFEHK -> EVHKNYSRSGA
 GKNKYM (in isoform IGF-1A).
 FT FT /FTID=VSP.002705.
 SQ SEQUENCE 143 AA; 16091 MW; 819AF577800A1B1A CRC64;
 Query Match 50.6%; Score 43; DB 1; Length 143;
 Best Local Similarity 100.0%; Pred. No. 3.9e-38;
 Matches 43; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 43
 DB 58 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 100
 RESULT 10
 IGF1_CAPHI STANDARD; PRT; 154 AA.
 ID IGF1_SHEEP
 AC P51457;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 16-OCT-2001 (Rel. 40, Last sequence update)
 DT 15-MAR-2004 (Rel. 43, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (somatomedin).
 GN IGF1.
 OS Capra hircus (goat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Caprinae; Capra.
 CX NCBI_TaxID=9925;
 RN [1]
 RP SEQUENCE FROM N.A. AND TISSUE SPECIFICITY.
 RC STRAIN=Shiba; TISSUE=Liver;
 RX MEDLINE=95290780; PubMed=7772848;
 RA Mlkawa S., Yoshikawa G.-I., Yamano Y., Sakai H., Komano T., Hosoi Y.,
 RA Utsunoi K.;
 RT "Tissue- and development-specific expression of goat insulin-like
 RT growth factor-I (IGF-I) mRNA";
 RL Biosci. Biotechnol. Biochem. 59:759-761(1995).
 CC - FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC - SUBCELLULAR LOCATION: Secreted.
 CC - TISSUE SPECIFICITY: Expressed in all tissues examined: brain,
 CC lung, liver, spleen, uterus, ovary, testis, heart and skeletal
 CC muscle.
 CC - SIMILARITY: Belongs to the insulin family.
 CC
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 CC
 CC EMBL; D11378; BAA01976.1; -
 CC EMBL; D26119; BAB77524.1; ALT SEQ.
 CC EMBL; D26116; BAB77524.1; JOINED.
 CC EMBL; D26117; BAB77524.1; JOINED.
 CC EMBL; D26118; BAB77524.1; JOINED.

DR PIR; JC2483; JC2483.
 DR HSSP; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PRO0277; INSULIN.
 DR SMART; SMO0078; IGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KM Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 49
 FT CHAIN 50 119 BY SIMILARITY.
 FT PROPEP 50 78 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 50 78 B.
 FT DOMAIN 79 90 C.
 FT DOMAIN 91 111 A.
 FT DOMAIN 112 119 D.
 FT PROPEP 120 154 E PEPTIDE.
 FT DISULFID 55 97 BY SIMILARITY.
 FT DISULFID 67 110 BY SIMILARITY.
 FT DISULFID 96 101 BY SIMILARITY.
 SQ SEQUENCE 154 AA; 17082 MW; 0723B5BAF3068422 CRC64;
 Query Match 48.2%; Score 41; DB 1; Length 154;
 Best Local Similarity 100.0%; Pred. No. 5.4e-36;
 Matches 41; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 41
 DB 75 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 115
 RESULT 11
 IGF1_SHEEP STANDARD; PRT; 154 AA.
 ID IGF1_SHEEP
 AC P10763;
 DT 01-JUN-1989 (Rel. 11, Created)
 DT 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (somatomedin).
 GN IGF1.
 OS Ovis aries (sheep).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Caprinae; Ovis.
 CX NCBI_TaxID=9940;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=90126234; PubMed=2575490;
 RA Wong E.A., Ohlsen S.M., Godfredson J.A., Dean D.M., Wheaton J.E.;
 RT "Cloning of ovine insulin-like growth factor-I cDNA: heterogeneity
 RT in the mRNA population.";
 RL DNA 8:649-657(1989).
 CC (2)
 CC SEQUENCE FROM N.A.
 CC TISSUE=Liver;
 CC MEDLINE=91197361; PubMed=2015053;
 CC Dickinson M.C., Saunders J.C., Gilmour R.S.;
 RT "The ovine insulin-like growth factor-I gene: characterization,
 RT expression and identification of a putative promoter.";
 RL J. Mol. Endocrinol. 6:117-31(1991).
 CC (3)
 CC SEQUENCE FROM N.A.
 CC TISSUE=Liver;
 CC MEDLINE=93221682; PubMed=8466647;
 CC Ohlsen S.M., Dean D.M., Wong E.A.;
 RA "Characterization of multiple transcription initiation sites of the
 RA ovine insulin-like growth factor-I gene and expression profiles of
 RT three alternatively spliced transcripts.";
 RL DNA Cell Biol. 12:243-251(1993).
 CC (4)
 CC SEQUENCE OF 55-135 FROM N.A.
 CC STRAIN=Coopworth; TISSUE=Liver;
 CC MEDLINE=93250051; PubMed=8485157;

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RA Demmer J., Hill D.F., Petersen G.B.;
RT "Characterization of two sheep insulin-like growth factor II cDNAs
RT with different 5'-untranslated regions.";
RL Biochim. Biophys. Acta 1173:79-80(1993).
RV [5]
RP SEQUENCE OF 50-119.
RX MEDLINE=89136887; PubMed=2537174;
RA Francis G.L., McNeil K.A., Wallace J.C., Ballard F.J., Owens P.C.;
RT "Sheep insulin-like growth factors I and II: sequences, activities
RT and assays.";
RL Endocrinology 124:1173-1183(1989).
RV [6]
RP SEQUENCE OF 50-79.
RX MEDLINE=89323215; PubMed=2752053;
RA Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
RT "Simultaneous isolation of insulin-like growth factors I and II from
RT adult sheep serum.";
RL Biochim. Biophys. Acta 997:27-35(1989).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- ALTERNATIVE PRODUCTS:
CC Name=A;
CC IsoId=P10763-1; Sequence=Displayed;
CC Name=B;
CC IsoId=P10763-2; Sequence=VSP_002707;
CC Name=C;
CC IsoId=P10763-3; Sequence=VSP_002706;
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; M30653; AAA80532.1; -
DR EMBL; M30653; AAA80533.1; -
DR EMBL; M31734; AAA80535.1; -
DR EMBL; M31734; AAA80534.1; -
DR EMBL; M31735; AAA31545.1; -
DR EMBL; M31735; AAA31546.1; -
DR EMBL; M31735; AAA31547.1; -
DR EMBL; X69472; CAA49230.1; -
DR EMBL; X69473; CAA49230.1; JOINED.
DR EMBL; X69474; CAA49230.1; JOINED.
DR EMBL; X69475; CAA49230.1; JOINED.
DR EMBL; X69472; CAA49231.1; -
DR EMBL; X69473; CAA49231.1; JOINED.
DR EMBL; X69474; CAA49231.1; JOINED.
DR EMBL; X69475; CAA49232.1; -
DR EMBL; X69473; CAA49232.1; JOINED.
DR EMBL; X69475; CAA49232.1; JOINED.
DR EMBL; M89787; AAA31544.1; -
DR PIR; S22877; A33390.
DR HSSP; P01343; IGFI.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal; Alternative splicing.
FT SIGNAL 1 2
FT PROPEP 1 49
FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 50 78 B.
FT DOMAIN 79 90 C.
FT DOMAIN 91 111 A.

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FT DOMAIN 112 119 D.
FT PROPEP 120 154 E-PEPTIDE.
FT DISULFID 55 97 BY SIMILARITY.
FT DISULFID 67 110 BY SIMILARITY.
FT DISULFID 96 101 BY SIMILARITY.
FT VARSPIC 1 21 MKGISLPQGLFKCCDFLKL -> MWPT (in
FT isoform C).
FT VARSPIC 1 34 Missing (in isoform A).
FT CONFLICT 57 57 /FTId=VSP_002707.
FT SEQUENCE 154 AA; 17012 MW; E226CE6AF653CF3F CRC64;

Query Match 47.1%; Score 40; DB 1; Length 154;
Best Local Similarity 100.0%; Pred. No. 6; le-35;
Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPGTGYDECCFRCSDRLRLMYCAPLK 40
DB 75 NKPTGYSSRRAPGTGYDECCFRCSDRLRLMYCAPLK 114

RESULT 12
ID IGFA_MOUSE STANDARD; PRT; 127 AA.
AC P05017;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
GN IGF1 OR IGF-1.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxId=10090;
RN [1]
RP SEQUENCE FROM N.A.
RX TISSUE=Liver;
RX MEDLINE=87040760; PubMed=3774549;
RA Bell G.I., Stempien M.M., Fong N.M., Rall L.B.;
RT "Sequences of liver cDNAs encoding two different mouse insulin-like
RT growth factor I precursors.";
RL Nucleic Acids Res. 14:7873-7882(1986).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- ALTERNATIVE PRODUCTS:
CC Event=Alternative splicing; Named isoforms=2;
CC Name=IGF-IA;
CC IsoId=P05017-1; Sequence=Displayed;
CC Name=IGF-IB;
CC IsoId=P05018-1; Sequence=External;
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; X04480; CAA28168.1; -
DR PIR; A25540; A25540.
DR HSSP; P01343; IGFI.
DR MGD; MGI:96432; IGFI.
DR GO; GO:0010801; P:glial cell differentiation; IMP.
DR GO; GO:0007399; P:neurogenesis; IMP.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SMO0078; IIGF; 1.

```

DR PROSITE, P500262; INSULIN; 1.
 KM Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 22
 FT CHAIN 23 92 INSULIN-LIKE GROWTH FACTOR IA.
 FT DOMAIN 23 51 B.
 FT DOMAIN 52 63 C.
 FT DOMAIN 64 84 A.
 FT DOMAIN 85 92 D.
 FT PROPEP 93 127 E PEPTIDE.
 FT DISULFID 28 70 BY SIMILARITY.
 FT DISULFID 40 83 BY SIMILARITY.
 FT DISULFID 69 74 BY SIMILARITY.
 SQ SEQUENCE 127 AA; 14120 MW; 1054B8CAC72DCAD7 CRC64;

Query Match 36.5%; Score 31; DB 1; Length 127;
 Best Local Similarity 100.0%; Pred. No. 1,6e-25;
 Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

11 RRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 41
 58 RRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 88

RESULT 13
 IGFB_MOUSE STANDARD; PRT; 133 AA.
 ID IGFB_MOUSE
 AC P05018;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 15-MAR-2004 (Rel. 43, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=87040760; PubMed=3774549;
 RA Bell G.I., Stempien M.M., Fong N.M., Rall L.B.;
 RT "Sequences of liver cDNAs encoding two different mouse insulin-like
 growth factor I precursors."
 RL Nucleic Acids Res. 14:7873-7882(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=FVB/N; TISSUE=Liver;
 RX MEDLINE=22388257; PubMed=12477932;
 RA Klausner R.D., Collins F.S., Wagner L., Shennan C.M., Schuler G.D.,
 RA Altshul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang Y., Hsieh F.,
 RA Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Scapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Uediri T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Raba S.S., Loggellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
 RA Rosak S.A., McEwen P.J., McKernan K.J., Malek J.A., Gamaralle P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalon D.K., Muzny D.K., Sodergren E.J., Lu X., Gibbs S.A.,
 RA Fahy J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,
 RA Witting R.W., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield V.S.N., Krzywinski M.I., Skalska U., Smalls D.E.,
 RA Schurch A., Schein J.E., Jones S.J.M., Maita M.A.,
 RT "Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences."
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:

CC Event-Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P05018-1; Sequence=Displayed;
 CC Name=IGF-IA;
 CC IsoId=P05017-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC -----
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 CC -----

DR EMBL; X04482; CAA28170.1; -;
 DR EMBL; BC012409; AAH12409.1; -;
 DR HSSP; P01343; IGF1.
 DR MGD; MGI:96432; IGF1.
 DR GO; GO:0010001; P:glial cell differentiation; IMP.
 DR GO; GO:0007399; P:neurogenesis; IMP.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR0277; INSULINB.
 DR SMART; SM00078; IGF; 1.
 DR PROSITE; P500262; INSULIN; 1.
 KM Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 22
 FT CHAIN 23 92 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 23 51 B.
 FT DOMAIN 52 63 C.
 FT DOMAIN 64 84 A.
 FT DOMAIN 85 92 D.
 FT PROPEP 93 133 E PEPTIDE.
 FT DISULFID 28 70 BY SIMILARITY.
 FT DISULFID 40 83 BY SIMILARITY.
 FT DISULFID 69 74 BY SIMILARITY.
 SQ SEQUENCE 133 AA; 14915 MW; B8E5C0588062502 CRC64;

Query Match 36.5%; Score 31; DB 1; Length 133;
 Best Local Similarity 100.0%; Pred. No. 1,7e-25;
 Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

11 RRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 41
 58 RRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 88

RESULT 14
 IGFB_RAT STANDARD; PRT; 153 AA.
 ID IGFB_RAT
 AC P08025;
 DT 01-AUG-1988 (Rel. 08, Created)
 DT 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC MEDLINE=87222423; PubMed=3034909;
 RA Shimatsu A., Kotwein P.;
 RT "Mosaic evolution of the insulin-like growth factors. Organization,
 RT sequence, and expression of the rat insulin-like growth factor I
 RT gene."
 RL J. Biol. Chem. 262:7894-7900(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Testis;
 RX MEDLINE=88003970; PubMed=3652906;

RA Casella S.J., Smith E.P., van Wyk J.J., Joseph D.R., Hynes M.A.,
 RA Hoyt E.C., Lund P.K.;
 RT "Isolation of rat testis cDNAs encoding an insulin-like growth factor
 RT I precursor";
 RL DNA 6:325-330(1987).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91103966; PubMed=1368571;
 RA Kato H., Okoshi A., Miura Y., Noguchi T.;
 RT "A new cDNA clone relating to larger molecular species of rat
 RT insulin-like growth factor-I mRNA";
 RL Agric. Biol. Chem. 54:1599-1601(1990).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=89127259; PubMed=3221878;
 RA Roberts C.T., Laaky S.R., Lowe W.L., Seaman W.T., Lerolth D.;
 RT "Structure of the rat insulin-like growth factor II transcriptional
 RT unit: heterogeneous transcripts are generated from two promoters by
 RT use of multiple polyadenylation sites and differential ribonucleic
 RT acid splicing";
 RL Mol. Endocrinol. 2:1115-1126(1988).
 RN [5]
 RP SEQUENCE OF 46-153 FROM N.A.
 RX MEDLINE=87246437; PubMed=3595538;
 RA Murphy L.J., Bell G.I., Duckworth M.L., Friesen H.G.;
 RT "Identification, characterization, and regulation of a rat
 RT complementary deoxyribonucleic acid which encodes insulin-like growth
 RT factor-I";
 RL Endocrinology 121:684-691(1987).
 RN [6]
 RP SEQUENCE OF 49-118.
 RX MEDLINE=89174609; PubMed=2538424;
 RA Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
 RA Nakamura S., Niwa M., Zapf J.;
 RT "Primary structure of rat insulin-like growth factor-I and its
 RT biological activities";
 RL J. Biol. Chem. 264:5616-5621(1989).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-1A;
 CC IsoId=P08025-1; Sequence=Displayed;
 CC Name=IGF-1B;
 CC IsoId=P08024-1; Sequence=External;
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC -----
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 CC -----
 CC EMBL: X06043; CAA29436.1; -;
 DR EMBL: M15651; AAA41215.1; -;
 DR EMBL: M15647; AAA41215.1; JOINED.
 DR EMBL: M15648; AAA41215.1; JOINED.
 DR EMBL: M15649; AAA41215.1; JOINED.
 DR EMBL: M17714; AAA41227.1; -;
 DR EMBL: M17735; AAA41386.1; ALT INIT.
 DR EMBL: M15481; AAA41387.1; ALT_INIT.
 DR PIR: B27804; B27804.
 DR HSSP: P01343; IGR1.
 DR InterPro: IPR004825; Ins/IGF/relax.
 DR Pfam: PF00049; INSULINB.
 DR PRINTS: PRO0277; INSULINB.
 DR SMART: SM00078; IIGF.1.
 DR PROSITE: PS00262; INSULIN.1.
 KM Insulin family; Growth factor; Plasma; Alternative splicing; Signal.

FT SIGNAL 1 ?
 FT PROPEP 2 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR 1A.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 153 E. PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT CONFLICT 110 112 APL->VRC (IN REF. 4).
 SQ SEQUENCE 153 AA; 17079 MW; 966F3C0FAE85DE7 CAC64;
 Query Match 36.5%; Score 31; DB 1; Length 153;
 Best Local Similarity 100.0%; Pred. No. 1.9e-25;
 Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 11 RAAPQTGIVDECCFRSCDLRLRYMCAPLKP 41
 DB 84 RRAPQTGIVDECCFRSCDLRLRYMCAPLKP 114
 ID IGF1B_RAT STANDARD; PRT; 181 AA.
 AC P08024;
 DT 01-AUG-1988 (Rel. 08, Created)
 DT 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-1B) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Rattus.
 OX NCBI_TaxId=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=8722423; PubMed=3034590;
 RA Shimatsu A., Rotwein P.;
 RT "Mosaic evolution of the insulin-like growth factors. Organization,
 RT sequence, and expression of the rat insulin-like growth factor I
 RT gene";
 RL J. Biol. Chem. 262:7894-7900(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=88015572; PubMed=3658684;
 RA Shimatsu A., Rotwein P.;
 RT "Sequence of two rat insulin-like growth factor I mRNAs differing
 RT within the 5' untranslated region";
 RL Nucleic Acids Res. 15:7196-7196(1987).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=89127259; PubMed=3221878;
 RA Roberts C.T., Laaky S.R., Lowe W.L., Seaman W.T., Lerolth D.;
 RT "Structure of the rat insulin-like growth factor II transcriptional
 RT unit: heterogeneous transcripts are generated from two promoters by
 RT use of multiple polyadenylation sites and differential ribonucleic
 RT acid splicing";
 RL Mol. Endocrinol. 2:1115-1126(1988).
 RN [4]
 RP SEQUENCE OF 49-118.
 RX MEDLINE=89174609; PubMed=2538424;
 RA Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
 RA Nakamura S., Niwa M., Zapf J.;
 RT "Primary structure of rat insulin-like growth factor-I and its
 RT biological activities";
 RL J. Biol. Chem. 264:5616-5621(1989).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALTERNATIVE PRODUCTS:

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CC      Event=Alternative splicing; Named isoforms=2;
CC      Name=IGF-1B;
CC      IsoId=P08024-1; Sequence=Displayed;
CC      Name=IGF-1A;
CC      IsoId=P08025-1; Sequence=External;
CC      -1- SIMILARITY: Belongs to the insulin family.
CC      -----
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CC      or send an email to license@isb-sib.ch).
CC      -----
DR      EMBL; M15650; AAA41214.1; -
DR      EMBL; M15647; AAA41214.1; JOINED.
DR      EMBL; M15648; AAA41214.1; JOINED.
DR      EMBL; M15649; AAA41214.1; JOINED.
DR      EMBL; X06107; CAA29480.1; ALT_SEQ.
DR      EMBL; M15480; AAA41385.1; ALT_SEQ.
DR      PIR; A27804; A27804.
DR      HSSP; P01343; IGF1.
DR      InterPro; IPR004825; Ins/IGF/relax.
DR      Pfam; PF00049; Insulin; 1.
DR      PRINTS; PR00277; INSULINB.
DR      SMART; SM00078; IIGF; 1.
DR      PROSITE; PS00262; INSULIN; 1.
KW      Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
FT      SIGNAL          1
FT      PROPEP          ?
FT      CHAIN           49
FT      DOMAIN          49
FT      DOMAIN          78
FT      DOMAIN          89
FT      DOMAIN          90
FT      DOMAIN          111
FT      PROPEP          119
FT      DISULFID         54
FT      DISULFID         66
FT      DISULFID         95
FT      CONFLICT         110
SQ      SEQUENCE        181 AA; 20322 MW; 52BAB431875A1A06 CRC64;

Query Match          36.5%; Score 31; DB 1; Length 181;
Best Local Similarity 100.0%; Pred. No. 2.2e-25;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      11 RRAPQGIIVDECCFRSCDLRLMYCAFLKP 41
DB      84 RRAPQGIIVDECCFRSCDLRLMYCAFLKP 114

RESULT 16
IGF1_XENLA          STANDARD; PRT; 153 AA.
ID      IGF1_XENLA
AC      P16501;
DT      01-AUG-1990 (Rel. 15, Created)
DT      01-AUG-1990 (Rel. 15, Last sequence update)
DT      10-OCT-2003 (Rel. 42, Last annotation update)
DE      Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
OS      Xenopus laevis (African clawed frog).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Amphibia; Batrachia; Anura; Mesobatrachia; Pipidoidea; Pipidae;
OC      Xenopodidae; Xenopus.
OX      NCBI_TaxID=8335;
RN      [1]
RP      SEQUENCE FROM N.A.
RA      MEDLINE=90231335; PubMed=2330002;
RA      Kajimoto Y., Rotwein P.;
RT      "Evolution of insulin-like growth factor I (IGF-I): structure and
RT      expression of an IGF-I precursor from Xenopus laevis."
RL      Mol. Endocrinol. 4:217-226(1990).
CC      -1- FUNCTION: The insulin-like growth factors, isolated from plasma,

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CC      are structurally and functionally related to insulin but have a
CC      much higher growth-promoting activity.
CC      -1- SUBCELLULAR LOCATION: Secreted.
CC      -1- SIMILARITY: Belongs to the insulin family.
CC      -----
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CC      or send an email to license@isb-sib.ch).
CC      -----
DR      EMBL; M29857; AAA70330.1; -
DR      PIR; A36079; A36079.
DR      HSSP; P01343; IGF1.
DR      InterPro; IPR004825; Ins/IGF/relax.
DR      Pfam; PF00049; Insulin; 1.
DR      PRINTS; PR00277; INSULINB.
DR      SMART; SM00078; IIGF; 1.
DR      PROSITE; PS00262; INSULIN; 1.
KW      Insulin family; Growth factor; Plasma; Signal.
FT      SIGNAL          1
FT      PROPEP          ?
FT      CHAIN           49
FT      DOMAIN          49
FT      DOMAIN          78
FT      DOMAIN          89
FT      DOMAIN          90
FT      DOMAIN          111
FT      PROPEP          119
FT      DISULFID         54
FT      DISULFID         66
FT      DISULFID         95
SQ      SEQUENCE        153 AA; 17349 MW; 720EDDA17AFCEBE CRC64;

Query Match          22.4%; Score 19; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 8.4e-13;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      40 KPAXSASVRAQRTDMPK 58
DB      113 KPAXSASVRAQRTDMPK 131

RESULT 17
IGF1_COTUA          STANDARD; PRT; 124 AA.
ID      IGF1_COTUA
AC      P51462;
DT      01-OCT-1996 (Rel. 34, Created)
DT      01-OCT-1996 (Rel. 34, Last sequence update)
DT      10-OCT-2003 (Rel. 42, Last annotation update)
DE      Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
DE      (Fragment).
GN      IGF1.
OS      Coturnix coturnix japonica (Japanese quail).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Actinopterygii; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC      Coturnix.
OX      NCBI_TaxID=93934;
RN      [1]
RP      SEQUENCE FROM N.A.
RA      MEDLINE=95187621; PubMed=7881819;
RA      Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S.,
RA      Noguchi T.;
RT      "Insulin-like growth factor-I messenger RNA content in the oviduct of
RT      Japanese quail (Coturnix coturnix japonica): changes during growth
RT      and development or after estrogen administration."
RL      Comp. Biochem. Physiol. 109C:191-204(1994).
CC      -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC      are structurally and functionally related to insulin but have a
CC      much higher growth-promoting activity.
CC      -1- SUBCELLULAR LOCATION: Secreted.
CC      -1- SIMILARITY: Belongs to the insulin family.

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CC -----
CC EMBL; S75247; -, NOT_ANNOTATED_CDS.
CC HSSP; P01343; IGF1.
CC InterPro; IPR004825; Ins/IGF/relax.
CC Pfam; PF00049; Insulin; 1.
CC PRINTS; PR00277; INSULIN.
CC SMART; SM00078; IIGF; 1.
CC PROSITE; PS00262; INSULIN; 1.
CC Insulin family; Growth factor; Plasma.
CC NON_TER 1
CC PROPEP <1 19 POTENTIAL.
CC CHAIN 20 89 INSULIN-LIKE GROWTH FACTOR I.
CC DOMAIN 20 48 B.
CC DOMAIN 49 60 C.
CC DOMAIN 61 81 A.
CC DOMAIN 82 89 D.
CC PROPEP 90 124 E PEPTIDE.
CC DISULFID 25 67 BY SIMILARITY.
CC DISULFID 37 80 BY SIMILARITY.
CC DISULFID 66 71 BY SIMILARITY.
CC SEQUENCE 124 AA; 13888 MW; 52254EB1BA5C3B6 CRC64;

Query Match 18.8%; Score 16; DB 1; Length 124;
Best Local Similarity 100.0%; Pred. No. 1e-09;
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 43 KSARSVRAQRHTDMPK 58
Db 87 KSARSVRAQRHTDMPK 102

RESULT 18
IGF1_CHICK STANDARD; PRT; 153 AA.
ID IGF1_CHICK
AC P16254;
DT 01-NOV-1990 (Rel. 16, Created)
DT 01-NOV-1990 (Rel. 16, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1.
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031;
RN 11
RP SEQUENCE FROM N.A.
RX MEDLINE=90190648; PubMed=2628728;
RA Kajimoto Y., Rotwein P.;
RT "Structure and expression of a chicken insulin-like growth factor I
RT precursor.";
RL Mol. Endocrinol. 3:1907-1913 (1989).
RN 12
RP SEQUENCE OF 1-21 FROM N.A.
RX MEDLINE=91236750; PubMed=2033062;
RA Rotwein P., Kajimoto Y.;
RT "Structure of the chicken insulin-like growth factor I gene reveals
RT conserved promoter elements.";
RL J. Biol. Chem. 266:9724-9731 (1991).
RN 13
RP SEQUENCE OF 49-118.
RX MEDLINE=91106695; PubMed=2272467;
RA Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upson F.M.,
RA McMurtry J.P., Wallace J.C.;
RT "Chicken insulin-like growth factor-I: amino acid sequence,

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RT radioimmunoassay, and plasma levels between strains and during
RT growth.";
RL Gen. Comp. Endocrinol. 79:459-468 (1990).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
CC EMBL; M32791; AAA48828.1; -.
CC EMBL; M74176; AAA48829.1; -.
CC PIR; A41399; A41399.
CC HSSP; P01343; IGF1.
CC InterPro; IPR004825; Ins/IGF/relax.
CC Pfam; PF00049; Insulin; 1.
CC PRINTS; PR00277; INSULIN.
CC SMART; SM00078; IIGF; 1.
CC PROSITE; PS00262; INSULIN; 1.
CC Insulin family; Growth factor; Plasma; Signal.
CC SIGNAL 1
CC PROPEP 2 48
CC CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
CC DOMAIN 49 77 B.
CC DOMAIN 78 89 C.
CC DOMAIN 90 110 A.
CC DOMAIN 111 118 D.
CC PROPEP 119 153 E PEPTIDE.
CC DISULFID 54 96 BY SIMILARITY.
CC DISULFID 66 109 BY SIMILARITY.
CC DISULFID 95 100 BY SIMILARITY.
CC SEQUENCE 153 AA; 17267 MW; AA613FDED13EE2F8 CRC64;

Query Match 18.8%; Score 16; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 1.2e-09;
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 43 KSARSVRAQRHTDMPK 58
Db 116 KSARSVRAQRHTDMPK 131

RESULT 19
IGF1_ONCKI STANDARD; PRT; 176 AA.
ID IGF1_ONCKI
AC P17085;
DT 01-AUG-1990 (Rel. 15, Created)
DT 01-AUG-1990 (Rel. 15, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
OS Oncorhynchus kisutch (Coho salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8019;
RN 11
RP SEQUENCE FROM N.A.
RX MEDLINE=90190659; PubMed=2628735;
RA Cao Q.-P., Duguay S.J., Flisethkaya E.M., Steiner D.F., Chan S.J.;
RT "Nucleotide sequence and growth hormone-regulated expression of
RT salmon insulin-like growth factor I mRNA.";
RL Mol. Endocrinol. 3:2005-2010 (1989).
RN 12
RP SEQUENCE OF 45-114.
RX MEDLINE=94062830; PubMed=8243465;
RA Moriyama S., Duguay S.J., Conlon J.M., Duan C., Dickhoff W.W.,

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RA Piletskaya E.M.;
 RT "Recombinant coho salmon insulin-like growth factor I. Expression in
 RT Escherichia coli, purification and characterization.";
 RL Eur. J. Biochem. 218:205-211(1993).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC -----
 CC EMBL; M32792; AAA49410.1; -.
 CC PIR; A41396; A41396.
 CC HSSP; P01343; 1GF1.
 CC InterPro; IPR004825; Ins/IGF/relax.
 CC Pfam; PF00049; Insulin; 1.
 CC PRINTS; PR00277; INSULINB.
 CC SMART; SM00078; IIGF; 1.
 CC PROSITE; PS00262; INSULIN; 1.
 CC Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 ?
 FT PROPEP 1 44
 FT CHAIN 45 114 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 45 73 A.
 FT DOMAIN 74 85 B.
 FT DOMAIN 86 106 C.
 FT DOMAIN 107 114 D.
 FT PROPEP 115 176 E PEPTIDE.
 FT DISULFID 50 92 BY SIMILARITY.
 FT DISULFID 62 105 BY SIMILARITY.
 FT DISULFID 91 96 BY SIMILARITY.
 SQ SEQUENCE 176 AA; 19517 MW; 4AADCFCEDAD8094 CRC64;
 Query Match 15.3%; Score 13; DB 1; Length 176;
 Best Local Similarity 100.0%; Pred. No. 2e-06;
 Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 45 ARSVRAQRHTDMP 57
 DB 114 ARSVRAQRHTDMP 126
 RESULT 20
 ID IGFL_ONCMY STANDARD; PRT; 176 AA.
 AC Q02815;
 DT 01-FEB-1995 (Rel. 31, Created)
 DT 01-FEB-1995 (Rel. 31, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
 CC NCBI_TaxID=8022;
 CC [1]
 CC SEQUENCE FROM N.A.
 CC TISSUE=Liver;
 CC MEDLINE=93028377; PubMed=1409585;
 RA Shamloot M.J.; Chen T.T.;
 RT "Identification of a second insulin-like growth factor in a fish
 RT species.";
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.

CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
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 CC -----
 CC EMBL; M95183; AAA49412.1; -.
 CC PIR; A46244; A46244.
 CC HSSP; P01343; 1GF1.
 CC InterPro; IPR004825; Ins/IGF/relax.
 CC Pfam; PF00049; Insulin; 1.
 CC PRINTS; PR00277; INSULINB.
 CC SMART; SM00078; IIGF; 1.
 CC PROSITE; PS00262; INSULIN; 1.
 CC Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 ?
 FT PROPEP 1 44 BY SIMILARITY.
 FT CHAIN 45 114 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 45 73 A.
 FT DOMAIN 74 85 B.
 FT DOMAIN 86 106 C.
 FT DOMAIN 107 114 D.
 FT PROPEP 115 176 E PEPTIDE.
 FT DISULFID 50 92 BY SIMILARITY.
 FT DISULFID 62 105 BY SIMILARITY.
 FT DISULFID 91 96 BY SIMILARITY.
 SQ SEQUENCE 176 AA; 19510 MW; DE86283083DDAD06 CRC64;
 Query Match 15.3%; Score 13; DB 1; Length 176;
 Best Local Similarity 100.0%; Pred. No. 2e-06;
 Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 45 ARSVRAQRHTDMP 57
 DB 114 ARSVRAQRHTDMP 126
 RESULT 21
 ID IGFA_CYPCA STANDARD; PRT; 161 AA.
 AC Q90325;
 DT 01-NOV-1997 (Rel. 35, Created)
 DT 01-NOV-1997 (Rel. 35, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I, adult form precursor.
 OS Cyprinus carpio (Common carp).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
 OC Cyprinidae; Cyprinus.
 CC NCBI_TaxID=7962;
 CC [1]
 CC SEQUENCE FROM N.A.
 CC TISSUE=Liver;
 CC MEDLINE=97283739; PubMed=9137817;
 RA Haselmeier H.; Mikawa S.; Takayama E.; Toyohara H.;
 RA Sakaguchi M.;
 RT "Molecular cloning and growth hormone-regulated gene expression of
 RT carp insulin-like growth factor-I.";
 RL Biochem. Mol. Biol. Int. 41:877-886(1997).
 CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC -----
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CC -----
DR EMBL; D83271; BAA11879.1; -.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 ? POTENTIAL.
FT PROPEP ? 44 ? INSULIN-LIKE GROWTH FACTOR I, ADULT FORM.
FT CHAIN 45 114
FT DOMAIN 45 73 B.
FT DOMAIN 74 85 C.
FT DOMAIN 86 106 A.
FT DOMAIN 107 114 D.
FT PROPEP 115 161 E. PEPTIDE.
FT DISULFID 50 92 BY SIMILARITY.
FT DISULFID 62 105 BY SIMILARITY.
FT DISULFID 91 96 BY SIMILARITY.
SQ SEQUENCE 161 AA; 17915 MW; B949960563391AF8 CRC64;

Query Match 11.8%; Score 10; DB 1; Length 161;
Best Local Similarity 100.0%; Pred. No. 0.0027;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 29 LRLEMYCAP 38
DB 98 LRLEMYCAP 107

RESULT 22
ID IGF2 CYCA STANDARD; PRT; 161 AA.
IGFB CYCA
AC 090326;
DT 01-NOV-1997 (Rel. 35, Last Created)
DT 01-NOV-1997 (Rel. 35, Last Sequence Update)
DT 10-OCT-2003 (Rel. 42, Last Annotation Update)
DE Insulin-like growth factor I, juvenile form precursor.
OS Cyprinus carpio (Common carp).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Osteichthyes; Cypriniformes;
OC Cyprinidae; Cyprinus.
OC NCB1_TaxID=7962;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=97283739; PubMed=9137817;
RA Hashimoto H., Miwata S., Takayama E., Yokoyama Y., Toyohara H.,
RA Sakaguchi M.;
RT "Molecular cloning and growth hormone-regulated gene expression of
RT carp insulin-like growth factor-I."
RL Biochem. Mol. Biol. Int. 41:877-886(1997).
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; D83272; BAA11879.1; -.
DR HSSP; P01343; IGF1.

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DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 ? POTENTIAL.
FT PROPEP ? 44 ? INSULIN-LIKE GROWTH FACTOR I, JUVENILE
FT CHAIN 45 114 FORM.
FT DOMAIN 45 73 B.
FT DOMAIN 74 85 C.
FT DOMAIN 86 106 A.
FT DOMAIN 107 114 D.
FT PROPEP 115 161 E. PEPTIDE.
FT DISULFID 50 92 BY SIMILARITY.
FT DISULFID 62 105 BY SIMILARITY.
FT DISULFID 91 96 BY SIMILARITY.
SQ SEQUENCE 161 AA; 17918 MW; A48B63F5B8C0C2A CRC64;

Query Match 11.8%; Score 10; DB 1; Length 161;
Best Local Similarity 100.0%; Pred. No. 0.0027;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 29 LRLEMYCAP 38
DB 98 LRLEMYCAP 107

RESULT 23
ID IGF2 CHICK STANDARD; PRT; 66 AA.
IGFB CHICK
AC P33717;
DT 01-FEB-1994 (Rel. 28, Created)
DT 01-FEB-1994 (Rel. 28, Last Sequence Update)
DT 10-OCT-2003 (Rel. 42, Last Annotation Update)
DE Insulin-like growth factor II (IGF-II).
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OC NCB1_TaxID=9031;
RN [1]
RP SEQUENCE.
RX MEDLINE=90132351; PubMed=1688912;
RA Kallinos N.C., Wallace J.C., Francis G.L., Ballard F.J.;
RT "Chemical and biological characterization of chicken insulin-like
RT growth factor-II."
RL J. Endocrinol. 124:89-97(1990).
RN [2]
RP SEQUENCE OF 1-35.
RX MEDLINE=88244560; PubMed=3379351;
RA Dawe S.R., Francis G.L., McNamara P.J., Wallace J.C., Ballard F.J.;
RT "Purification, partial sequences and properties of chicken
RT insulin-like growth factors."
RL J. Endocrinol. 117:173-181(1988).
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting
CC activity. In vitro, they are potent mitogens for cultured cells.
CC IGF-II is influenced by placental lactogen and may play a role in
CC fetal development.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
DR HSSP; P01344; IGF2.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Mitogen; Growth factor.
FT SIGNAL 1 ? POTENTIAL.
FT CHAIN 45 114
FT DOMAIN 45 73 B.
FT DOMAIN 74 85 C.
FT DOMAIN 86 106 A.
FT DOMAIN 107 114 D.
FT PROPEP 115 161 E. PEPTIDE.
FT DISULFID 50 92 BY SIMILARITY.
FT DISULFID 62 105 BY SIMILARITY.
FT DISULFID 91 96 BY SIMILARITY.
SQ SEQUENCE 161 AA; 17918 MW; A48B63F5B8C0C2A CRC64;

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FT DOMAIN 61 66 D.
FT DISULFID 8 46 BY SIMILARITY.
FT DISULFID 20 59 BY SIMILARITY.
FT DISULFID 45 50 BY SIMILARITY.
SQ SEQUENCE 66 AA; 7298 MM; A018C0E71D5B1E2 CRC64;

Query Match 10.6%; Score 9; DB 1; Length 66;
Best Local Similarity 100.0%; Pred. No. 0.014;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 21 ECCFRSDDL 29
DB 44 ECCFRSDDL 52

RESULT 24
IGF2_CAVPO STANDARD; PRT; 128 AA.
ID IGF2_CAVPO
AC Q08279;
DT 01-FEB-1995 (Rel. 31, Created)
DT 01-FEB-1995 (Rel. 31, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor II precursor (IGF-II) (Somatomedin A)
DE (Fragment).
GN IGF2.
OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Hystriocognathi; Caviidae; Cavia.
OX NCBI_TaxID=10141;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Hartley; TISSUE=Liver;
RX MEDLINE=93246007; Pubmed=1301379;
RA Levinovitz A., Norstedt G., van den Berg S., Robinson I.C.A.F.,
RA Ekstrom T.J.;
RT "Isolation of an insulin-like growth factor II cDNA from guinea pig
RT liver: expression and developmental regulation."
RL Mol. Cell. Endocrinol. 89:105-110(1992).
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting
CC activity. In vitro, they are potent mitogens for cultured cells.
CC IGF-II is influenced by placental lactogen and may play a role in
CC fetal development.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- DEVELOPMENTAL STAGE: EXPRESSED PREDOMINANTLY IN FETAL TISSUES AND
CC AT LOWER LEVELS IN ADULT.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC -----
DR EMBL; S59899; AAB26479.1; -.
DR PIR; I57671; I57671.
DR HSSP; P01344; IGF2.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KM Insulin family; Mitogen; Growth factor; Signal.
FT SIGNAL 1 24
FT CHAIN 1 24 BY SIMILARITY.
FT DOMAIN 25 31 INSULIN-LIKE GROWTH FACTOR II.
FT DOMAIN 32 32 B.
FT DOMAIN 33 33 A.
FT DOMAIN 34 34 C.
FT DOMAIN 35 35 A.
FT DOMAIN 36 36 A.
FT DOMAIN 37 37 D.
FT PROPEP 38 42 E PEPTIDE (BY SIMILARITY).
FT DISULFID 43 43 BY SIMILARITY.
FT DISULFID 44 44 BY SIMILARITY.
FT DISULFID 45 45 BY SIMILARITY.

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FT DISULFID 70 75 BY SIMILARITY.
FT NON TER 128 128
SQ SEQUENCE 128 AA; 14419 MM; BC65A1DB1ACCE056 CRC64;

Query Match 10.6%; Score 9; DB 1; Length 128;
Best Local Similarity 100.0%; Pred. No. 0.025;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 21 ECCFRSDDL 29
DB 69 ECCFRSDDL 77

RESULT 25
IGF2_MUSVI STANDARD; PRT; 129 AA.
ID IGF2_MUSVI
AC P41654;
DT 01-NOV-1995 (Rel. 32, Created)
DT 01-NOV-1995 (Rel. 32, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor II precursor (IGF-II) (Fragment).
DE (Fragment).
GN Mustela vison (American mink).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Carnivora; Fissipedia; Mustelidae; Mustelinae;
OC Mustela.
OX NCBI_TaxID=9667;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=93307613; Pubmed=7686523;
RA Ekstrom T.J., Baeklin B.M., Lindqvist Y., Engstrom W.;
RT "Insulin-like growth factor II in the mink (Mustela vison): 1
RT determination of a cDNA nucleotide sequence and developmental
RT regulation of its expression."
RL Gen. Comp. Endocrinol. 90:243-250(1993).
CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting
CC activity. In vitro, they are potent mitogens for cultured cells.
CC IGF-II is influenced by placental lactogen and may play a role in
CC fetal development.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; S63459; AAB27392.2; -.
DR HSSP; P01344; IGF2.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SMO0078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KM Insulin family; Mitogen; Growth factor; Signal.
FT SIGNAL 1 24
FT CHAIN 1 24 BY SIMILARITY.
FT DOMAIN 25 31 INSULIN-LIKE GROWTH FACTOR II.
FT DOMAIN 32 32 B.
FT DOMAIN 33 33 A.
FT DOMAIN 34 34 C.
FT DOMAIN 35 35 A.
FT DOMAIN 36 36 A.
FT DOMAIN 37 37 D.
FT PROPEP 38 42 E PEPTIDE (BY SIMILARITY).
FT DISULFID 43 43 BY SIMILARITY.
FT DISULFID 44 44 BY SIMILARITY.
FT DISULFID 45 45 BY SIMILARITY.
SQ SEQUENCE 129 AA; 14436 MM; FD0661DAFB473D0 CRC64;

Query Match 10.6%; Score 9; DB 1; Length 129;

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Best Local Similarity 100.0%; Pred. No. 0.025;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 21 ECFRSCDL 29
Db 70 ECFRSCDL 78

Search completed: March 3, 2004, 11:53:48
Job time : 15 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 11:47:44 ; Search time 20 Seconds
(without alignments)
408.814 Million cell updates/sec

Title: US-09-852-261-2_COPY_26_110
Perfect score: 85
Sequence: 1 NKPRTGSSSRRAAPQGTIVD.....STNKTKSPKRSSTFEHK 85

Scoring table:
Gapop 60.0 , Gapext 60.0

Searched: 283366 seqs, 96191526 residues

Word size : 0

Total number of hits satisfying chosen parameters: 283366

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Listing first 100 summaries

Database : PIR_78:*

1: pir1:*\n2: pir2:*\n3: pir3:*\n4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	78	91.8	195	1	IGHULB
2	61	71.8	137	1	IGHULB
3	61	71.8	137	2	A36552
4	61	71.8	153	1	IGHULB
5	58	68.2	122	2	PN0622
6	58	68.2	153	1	IGHULB
7	58	68.2	153	2	IGHULB
8	41	48.2	154	2	IGHULB
9	40	47.1	138	2	IGHULB
10	40	47.1	138	2	IGHULB
11	31	36.5	127	2	A35540
12	31	36.5	153	2	B27804
13	31	36.5	153	2	B27804
14	31	36.5	159	2	A26859
15	26	30.6	127	2	B40912
16	26	30.6	127	2	B40912
17	19	22.4	153	2	A36079
18	19	22.4	153	2	A36079
19	13	15.3	149	2	D54270
20	13	15.3	155	2	D54270
21	13	15.3	161	2	C54012
22	13	15.3	176	2	A41396
23	13	15.3	176	2	A46244
24	13	15.3	188	2	A54270
25	13	15.3	188	2	B54270
26	9	10.6	44	2	A34049
27	9	10.6	93	2	I35642
28	9	10.6	128	2	I57671
29	9	10.6	155	1	I6302

30	9	10.6	179	2	S04858	insulin-like growth
31	9	10.6	180	1	IGHULB	insulin-like growth
32	9	10.6	180	1	IGHULB	insulin-like growth
33	9	10.6	180	1	A24913	insulin-like growth
34	9	10.6	181	2	B60738	insulin-like growth
35	9	10.6	183	2	S02423	insulin-like growth
36	9	10.6	183	2	I67610	insulin-like growth
37	9	10.6	187	2	T10697	insulin-like growth
38	9	10.6	210	2	S66484	insulin-like growth
39	9	10.6	214	2	B46244	insulin-like growth
40	8	9.4	214	2	I51240	insulin-like growth
41	8	9.4	471	2	B86170	ADRI [imported] -
42	8	9.4	769	2	A74403	probable transport
43	8	8.2	19	2	A21182	4K prothoracic
44	7	8.2	82	2	S69480	bombayxin A-10 prec
45	7	8.2	87	2	S69480	bombayxin B-10 prec
46	7	8.2	87	2	U00836	bombayxin B-10 - 81
47	7	8.2	88	2	S69489	bombayxin B-8 precu
48	7	8.2	89	1	IPMTA2	bombayxin A-2 precu
49	7	8.2	89	2	S69484	bombayxin A-8 precu
50	7	8.2	89	2	S69483	bombayxin A-8 precu
51	7	8.2	90	1	IPMTB1	bombayxin B-1 precu
52	7	8.2	90	1	IPMTB2	bombayxin B-2 precu
53	7	8.2	90	2	S69486	bombayxin B-6 precu
54	7	8.2	90	2	S69487	bombayxin B-7 precu
55	7	8.2	90	2	S69488	bombayxin B-7 precu
56	7	8.2	90	2	S69491	bombayxin B-3 precu
57	7	8.2	90	2	S69495	bombayxin B-9 precu
58	7	8.2	90	2	S69485	bombayxin B-4 precu
59	7	8.2	90	2	U00835	bombayxin B-5 precu
60	7	8.2	91	2	A60296	bombayxin C-1 precu
61	7	8.2	92	1	IPMTA3	bombayxin A-3 precu
62	7	8.2	92	2	S69478	bombayxin A-6 precu
63	7	8.2	92	2	S69477	bombayxin A-4 precu
64	7	8.2	92	2	A48322	bombayxin A-1 precu
65	7	8.2	92	2	S69482	bombayxin A-7 precu
66	7	8.2	92	2	S69481	bombayxin A-7 precu
67	7	8.2	92	2	S69479	bombayxin A-5 precu
68	7	8.2	92	2	U00825	bombayxin A-9 precu
69	7	8.2	93	2	S69496	bombayxin B-11 precu
70	7	8.2	95	2	S69498	bombayxin C-2 precu
71	7	8.2	152	2	T03173	gelatinase homolog
72	7	8.2	187	2	F70164	grp94 protein - lym
73	7	8.2	193	2	A53697	insulin-like growth
74	7	8.2	226	2	F75307	hypothetical prote
75	7	8.2	235	2	PC4418	pyruvate kinase (B
76	7	8.2	273	2	B70550	probable ciste prot
77	7	8.2	304	2	C71163	probable oligopept
78	7	8.2	309	2	G75068	abc transporter PA
79	7	8.2	310	2	A71439	hypothetical prote
80	7	8.2	345	2	S64476	hypothetical prote
81	7	8.2	352	2	I46532	protein co-factor
82	7	8.2	378	2	F90159	sarcosine oxidase,
83	7	8.2	389	2	T29488	hypothetical prote
84	7	8.2	423	2	G96554	hypothetical prote
85	7	8.2	429	2	H90157	aspartyl-tRNA synth
86	7	8.2	468	2	S70992	DNA topoisomerase
87	7	8.2	470	2	C82316	pyruvate kinase I
88	7	8.2	560	2	T51485	sugar transporter-
89	7	8.2	838	2	D70698	probable gyra prot
90	7	8.2	1249	2	F86909	probable DNA gyrase
91	7	8.2	1273	2	T10006	DNA topoisomerase
92	7	8.2	1391	2	T20406	hypothetical prote
93	6	7.1	66	2	A68740	insulin-like growth
94	6	7.1	67	2	T00991	hypothetical prote
95	6	7.1	90	2	S69492	bombayxin B-12 prec
96	6	7.1	108	2	S69863	hypothetical prote
97	6	7.1	110	2	S60591	Ig light chain var
98	6	7.1	113	2	AC3313	hypothetical prote
99	6	7.1	120	2	T30653	hypothetical prote
100	6	7.1	120	2	A63195	conserved hypothet

ALIGNMENTS

RESULT 1

insulin-like growth factor I precursor, splice form B [validated] - human
IGHULB
N/Alternate names: IGF-1B, somatomedin C
N/Contains: insulin-like growth factor IB-EI amide
C/Species: Homo sapiens (man)
C/Date: 30-Jun-1987 #sequence, revision 30-Jun-1987 #text_change 31-Dec-2000
C/Accession: A01611; A26181; S30540; B48960; A42664
R/Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.
J. Biol. Chem. 261, 4828-4832, 1986
A/Title: Organization and sequence of the human insulin-like growth factor I gene. Alter
A/Reference number: A92581; MUID:8616194; PMID:2937782
A/Accession: A01611
A/Molecule type: DNA
A/Residues: 1-195 <ROT1>
A/Cross-references: GB:M14155; NID:G183106; PIDN:AAA2537.1; PID:G183109
R/Rotwein, P.
Proc. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986
A/Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver.
A/Reference number: A26181; MUID:86094355; PMID:3455760
A/Accession: A26181
A/Molecule type: mRNA
A/Residues: 1-195 <ROT2>
A/Cross-references: GB:M11568; NID:G183111; PIDN:AAA52539.1; PID:G183112
R/Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
Submitted to the EMBL Data Library, November 1990
A/Description: Nucleotide sequence of the human fetal brain IGF-1b.
A/Reference number: S30540
A/Accession: S30540
A/Molecule type: mRNA
A/Residues: 1-195 <SAN>
A/Cross-references: EMBL:X56774; NID:G32991; PIDN:CAA40093.1; PID:G32992
R/Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Reinicke, M.; Collins, V.P.; von Holst, H.;
Cancer Res. 53, 2475-2478, 1993
A/Title: Characterization of insulin-like growth factor I in human primary brain tumors.
A/Reference number: A48960; MUID:93265440; PMID:8495408
A/Accession: B48960
A/Molecule type: mRNA
A/Residues: 1-195 <SR2>
A/Cross-references: GB:X56774; GB:S61860; NID:G32991; PIDN:CAA40093.1; PID:G32992
A/Experimental source: anaplastic oligodendroglioma
A/Note: sequence modified after extraction from NCBI backbone
A/Note: the authors translated the codon CAG for residues 124 and 133 as Glu
R/Siegrist, J.M.; Kasprzyk, P.G.; Treason, A.M.; Mulhane, J.L.; Quinn, K.A.; Cuttitta,
Proc. Natl. Acad. Sci. U.S.A. 89, 8107-8111, 1992
A/Title: A mitogenic peptide amide encoded within the E peptide domain of the insulin-1b
A/Reference number: A42664; MUID:92390398; PMID:1125646
A/Contents: annotation; IBB-1; amidated carboxyl end
A/Comment: For an alternative splice form, see PIR:IGHUL.
C/Genetics:
A/Gene: GDB:IGFI
A/Cross-references: GDB:120081; OMIM:147440
A/Map position: 12q22-12q24.1
A/Intons: 21/3; 74/1; 134/3
C/Superfamily: Insulin
C/Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
F:1-21/Domin: signal sequence #status predicted <SIG>
F:22-48/Domin: propeptide #status predicted <PRO>
F:49-118/Product: insulin-like growth factor I #status predicted <MAT>
F:49-77/Domin: insulin chain B-like #status predicted <CHB>
F:78-89/Domin: insulin connecting C peptide-like #status predicted <CHA>
F:90-110/Domin: insulin chain A-like #status predicted <CHA>
F:111-118/Domin: D peptide #status predicted <CHD>
F:119-195/Domin: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F:151-172/Product: insulin-like growth factor IB-EI amide #status predicted <MA2>
F:154-96, 66-109, 95-100/Dissulfide bonds: #status predicted
F:172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl

Query Match 91.8%; Score 78; DB 1; Length 195;

Best Local Similarity 100.0%; Pred. No. 7, 4e-73;
Matches 78; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLPKPAKSARSVRAQRHTDMPKQ 60
DB 74 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLPKPAKSARSVRAQRHTDMPKQ 133
QY 61 KYQPPSTNKTGKSQRKRG 78
DB 134 KYQPPSTNKTGKSQRKRG 151

RESULT 2

IGGPI

insulin-like growth factor I precursor - guinea pig

C/Species: Cavia porcellus (guinea pig)
C/Date: 30-Sep-1991 #sequence, revision 30-Sep-1991 #text_change 07-Nov-1997
C/Accession: S12719

R/Bell, G.I.; Stempien, M.M.; Fong, N.M.; Saino, S.
Nucleic Acids Res. 18, 4275, 1990

A/Title: Sequence of a cDNA encoding guinea pig IGF-I.
A/Reference number: S12719; MUID:90332447; PMID:2377480
A/Accession: S12719

A/Molecule type: mRNA
A/Residues: 1-137 <BEL>

A/Cross-references: EMBL:X52951

A/Note: it is uncertain whether Met-1 or Met-8 is the initiator

C/Superfamily: Insulin

C/Keywords: glycoprotein; growth factor; plasma

F:1-32/Domin: signal sequence #status predicted <SIG>

F:33-102/Product: insulin-like growth factor I #status predicted <MAT>

F:62-73/Domin: insulin chain B-like #status predicted <CHB>

F:74-94/Domin: insulin connecting C peptide-like #status predicted <CHA>

F:95-102/Domin: D peptide #status predicted <CHD>

F:103-137/Domin: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>

F:124/Binding site: carbonylate (Asn) (covalent) #status predicted

Query Match

Best Local Similarity 100.0%; Pred. No. 1, 9e-55;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLPKPAKSARSVRAQRHTDMPKQ 60
DB 58 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLPKPAKSARSVRAQRHTDMPKQ 117
QY 61 K 61
DB 118 K 118

RESULT 3

insulin-like growth factor Ia precursor - human

C/Species: Homo sapiens (man)
C/Date: 12-Apr-1991 #sequence, revision 12-Apr-1991 #text_change 16-Jul-1999
C/Accession: A36552

R/Tobin, G.; Yee, D.; Brenner, N.; Rotwein, P.
Mol. Endocrinol. 4, 1914-1920, 1990

A/Title: A novel human insulin-like growth factor I messenger RNA is expressed in non

A/Reference number: A36552; MUID:91187000; PMID:2082190

A/Accession: A36552

A/Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-137 <TOB>

A/Cross-references: GB:M37464; NID:G184833; PIDN:AAA52789.1; PID:G184834

C/Superfamily: Insulin

Query Match 71.8%; Score 61; DB 2; Length 137;
Best Local Similarity 100.0%; Pred. No. 1, 9e-55;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLMYCAPLPKPAKSARSVRAQRHTDMPKQ 60

Db 58 NKPTGYSSSRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAAKSARSVRAGRHDTMPKIQ 117
 QY 61 K 61
 118 K 118

RESULT 4

insulin-like growth factor I precursor, splice form A [validated] - human

N.Alternate names: IGF-I long splice form precursor; IGF-1A; somatomedin C

C.Species: Homo sapiens (man)

C.Date: 24-Apr-1994 #sequence revision 30-Jun-1987 #text change 31-Dec-2000

C.Accession: A92581; A23614; A93321; J05711; A23622; A92226; A60483; S30519; A49960; I57

R.Rotwein, P.; Pollock, K.M.; Didier, D.K.; Krivi, G.G.

J. Biol. Chem. 261, 4828-4832, 1986

A>Title: Organization and sequence of the human insulin-like growth factor I gene. Alter

A.Reference number: A92581; MUID:86168194; PMID:2937782

A.Accession: A92581

A.Molecule type: DNA

A.Residues: 1-153 <ROR>

A.Cross-references: GB:M4156; NID:G183107; PIDN:AAA52538.1; PID:G183110

R.de Paepe, Holthuisen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.; Bouma

FEBS Lett. 195, 179-184, 1986

A>Title: Organization of the human genes for insulin-like growth factors I and II.

A.Reference number: A91356; MUID:86108862; PMID:3002851

A.Accession: A23614

A.Molecule type: DNA

A.Residues: 24-153 <DEP>

A.Cross-references: GB:X03420; GB:X00362; NID:G33020; PIDN:CAA27152.1; PID:G33021; GB:X0

R.Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K.H.;

Nature 305, 609-611, 1983

A>Title: Sequence of cDNA encoding human insulin-like growth factor I precursor.

A.Reference number: A93321; MUID:84068210; PMID:6358902

A.Accession: A93321

A.Molecule type: mRNA

A.Residues: 1-153 <JAN>

A.Cross-references: GB:X00173; NID:G33015; PIDN:CAA24998.1; PID:G33016

A>Note: Met-24 is proposed as a likely initiator

R.Steenbergh, P.H.; Koonen-Reemst, A.M.C.B.; Cloutiers, C.B.J.M.; Susembach, U.S.

Biochem. Biophys. Res. Commun. 175, 507-514, 1991

A>Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.

A.Reference number: J05711; MUID:91207342; PMID:2018498

A.Accession: J05711

A.Molecule type: mRNA

A.Residues: 1-153 <STP>

A.Cross-references: EMBL:X57025; NID:G33007; PIDN:CAA0342.1; PID:G33008

R.le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeier, P.

FEBS Lett. 196, 108-112, 1986

A>Title: Complete characterization of the human IGF-I nucleotide sequence isolated from

A.Reference number: A23622; MUID:86108910; PMID:2935423

A.Accession: A23622

A.Molecule type: mRNA

A.Residues: 1-153 <LEB>

A.Cross-references: GB:M27544; NID:G184829; PIDN:AAA52787.1; PID:G306927

R.Rinderknecht, E.; Humbel, R.E.

J. Biol. Chem. 253, 2769-2776, 1978

A>Title: The amino acid sequence of human insulin-like growth factor I and its structure

A.Reference number: A92226; MUID:78130171; PMID:633300

A.Accession: A92226

A.Molecule type: Protein

A.Residues: 49-118 <RIN>

R.Karey, K.P.; Marguardt, H.; Stibasku, D.A.

Blood 74, 1084-1092, 1989

A>Title: Human platelet-derived micogens. Identification of insulinlike growth factors I

A.Reference number: A60483; MUID:89323462; PMID:2752153

A.Accession: A60483

A.Molecule type: protein

A.Residues: 49-53, 'X', 55-65, 'X', 67-75 <KAR>

A.Experimental source: platelet lysate

R.Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.

submitted to the EMBL Data Library, November 1990

A>Description: Nucleotide sequence of the human fetal brain IGF-1a.

A.Reference number: S30519

A.Accession: S30519

A>Status: preliminary

A.Molecule type: mRNA

A.Residues: 1-153 <NOR>

A.Cross-references: EMBL:X56773; NID:G12989; PIDN:CAA40092.1; PID:G32990

R.Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.; S

Cancer Res. 53, 2475-2478, 1993

A>Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.

A.Reference number: A48960; MUID:93265440; PMID:8495408

A.Accession: A48960

A.Molecule type: mRNA

A.Residues: 1-123, 'E', 125-132, 'E', 134-153 <SAN>

A.Cross-references: GB:M2664; NID:G183119; PIDN:AAA52543.1; PID:G183120

A.Experimental source: amniotic oligodendroglioma

A>Note: sequence extracted from NCBI backbone (NCBI:133056, NCBI:133057)

A>Note: sequence inconsistent with the nucleotide translation

R.Rall, L.B.; Scott, J.; Bell, G.I.

Meth. Enzymol. 146, 239-248, 1987

A>Title: Human insulin-like growth factor I and II messenger RNA: isolation of complement

A.Reference number: I57044; MUID:88065102; PMID:3683205

A.Accession: I57044

A>Status: preliminary; translated from GB/EMBL/DBJ

A.Residues: 24-153 <RAL>

A.Cross-references: GB:M2664; NID:G183119; PIDN:AAA52543.1; PID:G183120

C/Comment: The insulin-like growth factors, isolated from plasma, are structurally and f

C/Genetic:

A:Gene: GDB:IGF1

A:Cross-references: GDB:120081; OMIM:147440

A:Map position: 12622-12624.1

A:Introns: 21/3; 74/1; 134/3

C:Superfamily: insulin

C:Keywords: alternative splicing; growth factor; plasma

F:1-21/Domains: signal sequence #status predicted <SIG>

F:22-48/Domains: propeptide #status predicted <PRO>

F:49-118/Product: insulin-like growth factor I #status experimental <MAT>

F:49-77/Domains: insulin chain B-like #status experimental <CHB>

F:78-89/Domains: insulin connecting C peptide-like #status experimental <CHA>

F:90-110/Domains: insulin chain A-like #status experimental <CHA>

F:111-118/Domains: D peptide #status experimental <CHD>

F:119-153/Domains: carboxyl-terminal propeptide (C peptide) #status predicted <CPRO>

F:54-96,66-109,95-100/Disulfide bonds: #status predicted

Query Match 71.8%; Score 61; DB 1; Length 153;

Best Local Similarity 100.0%; Pred. No. 2.1e-55;

Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAAKSARSVRAGRHDTMPKIQ 60

Db 74 NKPTGYSSSRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAAKSARSVRAGRHDTMPKIQ 133

QY 61 K 61

Db 134 K 134

RESULT 5

insulin-like growth factor Ia precursor - dog (fragment)

C.Species: Canis lupus familiaris (dog)

C.Date: 10-Mar-1994 #sequence revision 10-Mar-1994 #text change 07-May-1999

C.Accession: P06622

R.Delfontaine, P.; Lou, H.; Harrison, D.G.; Bernstein, K.B.

Gene 130, 305-306, 1993

A>Title: Sequence of a cDNA encoding dog insulin-like growth factor I.

A.Reference number: P06622; MUID:93366192; PMID:8359700

A.Accession: P06622

A.Molecule type: mRNA

A.Residues: 1-122 <DEU>

C/Comment: This protein is a potent inducer of DNA synthesis in multiple cell types, acti

C/Genetics:
A/Gene: IGF1a
C/Superfamily: Insulin
C/Keywords: growth factor
F:20-89/Product: insulin-like growth factor Ia (fragment) #status predicted <MAT>

Query Match 68.2%; Score 58; DB 2; Length 122;
Best Local Similarity 100.0%; Pred. No. 2,6e-52;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPASASVRAQRTDMPK 58
DB 45 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPASASVRAQRTDMPK 102

RESULT 6

IGB01
Insulin-like growth factor IA precursor - bovine (fragment)

N/Alternate names: IGF-I; somatomedin C
C/Species: Bos primigenius taurus (cattle)
C/Date: 31-Mar-1988 #sequence revision 28-Apr-1995 #text_change 16-Jun-1999
C/Accession: S12672; A25623; S00465

R/Potals, T.; Murphy, C.; Gannon, F.
Nucleic Acids Res. 18, 676, 1990

A/Title: Nucleotide sequence of the bovine insulin-like growth factor 1 (IGF-1) and its
A/Reference number: S12672; MUID:90175014; PMID:2308658

A/Accession: S12672

A/Molecule type: mRNA

A/Residues: 1-153 <POT>

A/Cross-references: EMBL:X15726; NID:G454; PIDN:CAA33746.1; PID:G455

A/Experimental source: liver

R/Honegger, A.; Humbel, R.E.

J. Biol. Chem. 261, 569-575, 1986

A/Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purified

A/Reference number: A92585; MUID:86058681; PMID:3941093

A/Accession: A25623

A/Molecule type: protein

A/Residues: 49-118 <HON>

R/Francis, G.L.; Upson, F.M.; Ballard, F.J.; McNeill, K.A.; Wallace, J.C.

Biochem. J. 251, 95-103, 1988

A/Title: Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences and biologic

A/Reference number: S00465; MUID:88268620; PMID:3390164

A/Accession: S00465

A/Molecule type: protein

A/Residues: 49-118 <FRA>

A/Experimental source: colostrum

A/Note: a form of IGF-I lacking the first three residues and possessing enhanced biologi

C/Keywords: alternative splicing; colostrum; growth factor; plasma

F:1-20/Domain: signal sequence (fragment) #status predicted <SIG>

F:22-48/Domain: propeptide #status predicted <PRO>

F:49-118/Product: insulin-like growth factor IA (active) #status experimental <MAT>

F:49-77/Domain: insulin B chain-like #status experimental <DOB>

F:78-89/Domain: insulin A chain-like #status experimental <DOA>

F:90-110/Domain: insulin A chain-like #status experimental <CHD>

F:111-118/Domain: D peptide #status experimental <DPE>

F:119-153/Domain: carboxyl-terminal propeptide (B peptide) #status predicted <CPR>

F:54-96/66-109,95-100/Disulfide bonds: #status predicted

Query Match 68.2%; Score 58; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 2,6e-52;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPASASVRAQRTDMPK 58
DB 74 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPASASVRAQRTDMPK 131

RESULT 7

S12825
Insulin-like growth factor I precursor - pig
N/Alternate names: somatomedin C
C/Species: Sus scrofa domestica (domestic pig)

C/Date: 13-Jan-1995 #sequence revision 13-Jan-1995 #text_change 16-Jul-1999
C/Accession: S12825; S21488; A34938; A60738

R/Mueller, M.; Brem, G.

Nucleic Acids Res. 18, 364, 1990

A/Title: Nucleotide sequence of porcine insulin-like growth factor I: 5' untranslated

A/Reference number: S12825; MUID:90221822; PMID:2326169

A/Accession: S12825

A/Status: preliminary

A/Molecule type: DNA

A/Residues: 1-153 <MUE>

A/Cross-references: EMBL:X52388

R/Dickson, M.C.; Huskisson, N.S.; Gilmour, R.S.

submitted to the EMBL Data Library, November 1989

A/Description: Porcine insulin-like growth factor gene: sequence of exon and 5' non-c

A/Reference number: S21488

A/Accession: S21488

A/Molecule type: DNA

A/Residues: 1-21 <DIC>

A/Cross-references: EMBL:X17638; NID:G1995; PIDN:CAA35632.1; PID:G1996

R/Tavakkol, A.; Simmen, F.A.; Simmen, R.C.M.

Mol. Endocrinol. 2, 674-681, 1988

A/Title: Porcine insulin-like growth factor-I (IGF-I): complementary deoxyribonucleic

A/Reference number: A34938; MUID:89096956; PMID:3211153

A/Accession: A34938

A/Molecule type: mRNA

A/Residues: 1-21-153 <TAV>

A/Cross-references: GB:M31175

R/Francis, G.L.; Owens, P.C.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.

Endocrinol. 122, 681-687, 1989

A/Title: Purification, amino acid sequences and assay cross-reactivities of porcine I

A/Reference number: A60738; MUID:90039035; PMID:2809477

A/Accession: A60738

A/Molecule type: protein

A/Residues: 49-117, 'X' <FRA>

C/Genetics:

A/Introns: 21/3; 74/1

C/Superfamily: Insulin

C/Keywords: growth factor

F:1-22/Domain: signal sequence #status predicted <SIG>

F:23-48/Domain: propeptide #status predicted <PRO>

F:49-153/Product: insulin-like growth factor IA #status experimental <MAT>

Query Match 68.2%; Score 58; DB 2; Length 153;
Best Local Similarity 100.0%; Pred. No. 2,6e-52;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPASASVRAQRTDMPK 58
DB 74 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPASASVRAQRTDMPK 131

RESULT 8

JC2483
Insulin-like growth factor-I precursor - goat

C/Species: Capra aegagrus hircus (domestic goat)

C/Date: 16-Mar-1995 #sequence revision 26-May-1995 #text_change 17-Mar-1999

C/Accession: JC2483

R/Mikawa, S.; Yoshikawa, G.; Aoki, H.; Yamano, Y.; Sakai, H.; Komano, T.

Biosci. Biotechnol. Biochem. 59, 87-92, 1995

A/Title: Dynamic aspects in the expression of the goat insulin-like growth factor-I (

A/Reference number: JC2483; MUID:95201385; PMID:7765981

A/Accession: JC2483

A/Molecule type: mRNA

A/Residues: 1-154 <MIK>

A/Cross-references: GB:S11378; DDBJ:D26116; DDBJ:D26117; DDBJ:D26118; DDBJ:D26119

C/Genetics:

A/Introns: 21/3; 75/1; 135/3

C/Superfamily: Insulin

F:1-49/Domain: signal sequence #status predicted <SIG>

F:50-119/Product: insulin-like growth factor-I #status predicted <MAT>

Query Match 48.2%; Score 41; DB 2; Length 154;
Best Local Similarity 100.0%; Pred. No. 8.8e-35;
Matches 41; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRYMCAPLKP 41
Db 75 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRYMCAPLKP 115

RESULT 9
S22878
Insulin-like growth factor I precursor, splice form 2 - sheep
C/Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C/Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999
C/Accession: S22878; S07198
R/Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
J. Mol. Endocrinol. 6, 17-31, 1991
A/Title: The ovine insulin-like growth factor-I gene: characterization, expression and
A/Reference number: S22877; PMID:91197361; PMID:2015053
A/Accession: S22878
C/Genetics:
A/Status: preliminary
A/Molecule type: DNA
A/Residues: 1-138 <DIC>
A/Cross-references: EMBL:X51358
R/Francis, G.L.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A/Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A/Reference number: S07198; PMID:89136887; PMID:2537174
A/Accession: S07198
A/Molecule type: protein
A/Residues: 34-103 <FRA>
A/Experimental source: fetal plasma
C/Genetics:
A/Intons: 5/3; 59/1; 119/3
C/Superfamily: insulin
C/Keywords: alternative splicing; growth factor; plasma
F/7-33/Domain: propeptide #status predicted <PRO>
F/34-103/Product: insulin-like growth factor I (active) #status experimental <MAT>
F/34-62/Domain: insulin chain B-like #status predicted <DOB>
F/63-74/Domain: insulin connecting peptide-like #status predicted <CHC>
F/75-95/Domain: insulin chain A-like #status predicted <DOA>
F/96-103/Domain: peptide D #status predicted <CHD>
F/104-138/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F/39-81,51-94,80-85/Disulfide bonds: #status predicted

Query Match 47.1%; Score 40; DB 2; Length 138;
Best Local Similarity 100.0%; Pred. No. 8.7e-34;
Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRYMCAPLKP 40
Db 59 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRYMCAPLKP 98

A/Accession: A33390
A/Molecule type: mRNA
A/Residues: 1-43, 'SS', 46-154 <WON>
A/Cross-references: GB:M30653; NID:G165929; PIDN:AAA80532.1; PID:G165930
R/Hey, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.
Biochim. Biophys. Acta 997, 27-35, 1989
A/Title: Simultaneous isolation of insulin-like growth factors I and II from adult sheep
A/Reference number: S04972; PMID:89323215; PMID:2752053
A/Accession: S07965
A/Molecule type: protein
A/Residues: 50-79 <HEX>
R/Francis, G.L.; McNeill, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A/Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A/Reference number: S07198; PMID:89136887; PMID:2537174
A/Accession: S07198
A/Molecule type: protein
A/Residues: 50-119 <FRA>
A/Experimental source: fetal plasma
C/Genetics:
A/Intons: 21/3; 75/1; 135/3
C/Superfamily: insulin
C/Keywords: alternative splicing; growth factor; plasma
F/1-21/Domain: signal sequence #status predicted <SIG>
F/22-49/Domain: propeptide #status predicted <PRO>
F/50-119/Product: insulin-like growth factor I (active) #status experimental <MAT>
F/50-78/Domain: insulin chain B-like #status predicted <DOB>
F/79-90/Domain: insulin connecting peptide-like #status predicted <CHC>
F/91-111/Domain: insulin chain A-like #status predicted <DOA>
F/112-119/Domain: peptide D #status predicted <CHD>
F/120-154/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F/55-97,67-110,96-101/Disulfide bonds: #status predicted

Query Match 47.1%; Score 40; DB 2; Length 154;
Best Local Similarity 100.0%; Pred. No. 9.5e-34;
Matches 40; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRYMCAPLKP 40
Db 75 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRYMCAPLKP 114

RESULT 11
A25540
Insulin-like growth factor IA precursor - mouse
N/Alternate names: IGF-1A; somatomedin C
C/Species: Mus musculus (house mouse)
C/Date: 30-Jun-1988 #sequence_revision 30-Jun-1988 #text_change 16-Jul-1999
C/Accession: A25540; I55295; I55090; B25540
R/Bell, G.I.; Stempien, M.M.; Forgy, N.M.; Rall, L.B.
Nucleic Acids Res. 14, 7873-7882, 1986
A/Title: Sequences of liver cDNAs encoding two different mouse insulin-like growth factor
A/Reference number: A33643; PMID:87040760; PMID:3774549
A/Accession: A25540
A/Molecule type: mRNA
A/Residues: 1-127 <BEU>
A/Cross-references: GB:X04480; NID:G51801; PIDN:CAA818.1; PID:G51802
R/Tollsten, S.E.; Lajthya, R.; McCusker, R.H.; Clemmons, D.R.; Kotwinski, P.
J. Biol. Chem. 264, 13810-13817, 1989
A/Title: Insulin-like growth factors (IGF) in muscle development. Expression of IGF-I, II
A/Reference number: I55295; PMID:89340472; PMID:2474537
A/Accession: I55295
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: DNA
A/Residues: 49-108 <RGS>
A/Cross-references: GB:X28139; NID:G341835; PIDN:AAA74553.1; PID:G550489
R/Mathews, L.S.; Norstedt, G.; Palmieri, R.D.
Proc. Natl. Acad. Sci. U.S.A. 83, 9343-9347, 1986
A/Title: Regulation of insulin-like growth factor I gene expression by growth hormone.
A/Reference number: I59090; PMID:87092249; PMID:3467309
A/Accession: I59090
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: DNA

A:Residues: 49-108 <RE2>
A:Cross-references: GB:M14983; NID:G194495; PIDN:AAA7925.1; PID:G194496
C:Genetics:
A:Gene: Igf1
C:Superfamily: insulin
C:Keywords: alternative splicing; growth factor
F:1-22/Domain: signal sequence #status predicted <SIG> #status predicted <MAT>
F:23-127/Product: insulin-like growth factor IA (active) #status predicted <DOB>
F:23-51/Domain: insulin chain B-like #status predicted <DOB>
F:52-63/Domain: insulin connecting C peptide-like #status predicted <DOC>
F:64-84/Domain: insulin chain A-like #status predicted <DOA>
F:85-92/Domain: D peptide #status predicted <DD>
F:93-127/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

Query Match 36.5%; Score 31; DB 2; Length 127;
Best Local Similarity 100.0%; Pred. No. 1.6e-24;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 11 RRAPQTGIVDECCFRSCDLRLRLEMYCAPLKP 41
DB 58 RRAPQTGIVDECCFRSCDLRLRLEMYCAPLKP 88

RESULT 12
B27804
Insulin-like growth factor IA precursor - rat
N:Alternate names: IGF-1A; somatomedin C
C:Species: Rattus norvegicus (Norway rat)
C:Date: 16-Mar-1989 #sequence_revision 16-Mar-1989 #text_change 21-Jul-2000
C:Accession: B27804; A27849; J01033; A28504; JN0088; A32857; A61096
R:Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 262, 7894-7900, 1987
A:Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence, and
A:Reference number: A27804; MUID:87222423; PMID:3034909
A:Accession: B27804
A:Molecule type: DNA
A:Residues: 1-153 <SH1>
A:Cross-references: GB:M15651; GB:J02743; NID:G204297; PIDN:AAA41215.1; PID:G204300
R:Casella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lund
DNA 6, 325-330, 1987
A:Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precursor
A:Reference number: A27849; MUID:88003970; PMID:3652906
A:Accession: A27849
A:Molecule type: mRNA
A:Residues: 27-153 <CAS>
A:Cross-references: GB:M17335; NID:G204751; PIDN:AAA41386.1; PID:G204752
R:Kato, H.; Okoshi, A.; Miura, Y.; Noguchi, T.
Agric. Biol. Chem. 54, 1599-1601, 1990
A:Title: A new cDNA clone relating to larger molecular species of rat insulin-like growth
A:Reference number: JH0133; MUID:91103966; PMID:1368571
A:Accession: JH0133
A:Molecule type: mRNA
A:Residues: 27-153 <KAT>
A:Cross-references: GB:P00698; NID:G220780; PIDN:BA00604.1; PID:G220781
A:Experimental source: liver
R:Murphy, L.J.; Bell, G.I.; Duckworth, M.L.; Friese, H.G.
Endocrinology 121, 684-691, 1997
A:Title: Identification, characterization, and regulation of a rat complementary deoxyribo-
A:Reference number: A28504; MUID:87246437; PMID:3595538
A:Accession: A28504
A:Molecule type: mRNA
A:Residues: 46-153 <MUR>
A:Cross-references: GB:M17714; NID:G204324; PIDN:AAA41227.1; PID:G204325
R:Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
Agric. Biol. Chem. 54, 2225-2230, 1990
A:Title: Evidence of introduction by molecular cloning of artificial inverted sequence a
A:Reference number: JN0088; MUID:91136779; PMID:1368576
A:Accession: JN0088
A:Molecule type: mRNA
A:Residues: 22-153 <KA>
A:Experimental source: liver
A:Note: The authors present evidence that this mRNA may contain an artifactual inversion
R:Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa, M

J. Biol. Chem. 264, 5616-5621, 1989
A:Title: Primary structure of rat insulin-like growth factor-I and its biological acti
A:Reference number: A32857; MUID:89174609; PMID:2538424
A:Accession: A32857
A:Molecule type: protein
A:Residues: 49-118 <RAM>
R:Canalis, E.; McCarthy, T.; Centrella, M.
Endocrinology 122, 22-27, 1988
A:Title: Isolation and characterization of insulin-like growth factor I (somatomedin-C
A:Reference number: A61096; MUID:88082445; PMID:3335205
A:Accession: A61096
A:Molecule type: protein
A:Residues: 49-53 'X'; 55-65 <CAN>
A:Superfamily: insulin
C:Keywords: alternative splicing; growth factor
F:49-118/Product: insulin-like growth factor I #status experimental <ILG>

Query Match 36.5%; Score 31; DB 2; Length 153;
Best Local Similarity 100.0%; Pred. No. 1.8e-24;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 11 RRAPQTGIVDECCFRSCDLRLRLEMYCAPLKP 41
DB 84 RRAPQTGIVDECCFRSCDLRLRLEMYCAPLKP 114

RESULT 13
A26859
Insulin-like growth factor IB precursor - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 16-Jul-1999
C:Accession: A26859
R:Shimatsu, A.; Rotwein, P.
Nucleic Acids Res. 15, 7196, 1987
A:Title: Sequence of two rat insulin-like growth factor I mRNAs differing within the
A:Reference number: A26859; MUID:88015572; PMID:3658684
A:Accession: A26859
A:Molecule type: mRNA
A:Residues: 1-159 <SH1>
A:Cross-references: GB:X06107; GB:M32260; GB:Y00429; NID:G56424; PIDN:CAA29480.1; PID:
C:Superfamily: insulin
C:Keywords: alternative splicing; growth factor

Query Match 36.5%; Score 31; DB 2; Length 159;
Best Local Similarity 100.0%; Pred. No. 1.9e-24;
Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 11 RRAPQTGIVDECCFRSCDLRLRLEMYCAPLKP 41
DB 84 RRAPQTGIVDECCFRSCDLRLRLEMYCAPLKP 114

RESULT 14
A27804
Insulin-like growth factor I precursor - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 09-Jun-1988 #sequence_revision 09-Jun-1988 #text_change 16-Jul-1999
C:Accession: A27804; I65202
R:Shimatsu, A.; Rotwein, P.
J. Biol. Chem. 262, 7894-7900, 1987
A:Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence,
A:Reference number: A27804; MUID:87222423; PMID:3034909
A:Accession: A27804
A:Molecule type: DNA
A:Residues: 1-151 <SH1>
A:Cross-references: GB:M15650; GB:J02743; NID:G204296; PIDN:AAA41214.1; PID:G204299
R:Roberts, C.T.
Biochem. Biophys. Res. Commun. 146, 1154-1159, 1987
A:Title: Rat IGF-I cDNA's contain multiple 5'-untranslated regions.
A:Reference number: I52218; MUID:87298553; PMID:3619921
A:Accession: I52202
A:Status: preliminary; translated from GB/EMBL/DBJ

A:Molecule type: mRNA
 A:Residues: 1-27 <RES>
 A:Cross-references: GB:M17594; NID:G204759; PID:AAA41390.1; PID:G204760
 C:Superfamily: insulin
 C:Keywords: alternative splicing

Query Match 36.5%; Score 31; DB 2; Length 181;
 Best Local Similarity 100.0%; Pred. No. 2e-24;
 Matches 31; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 11 RRAPQTGIVDECCFRSCDLRLRLMYC 41
 |||||
 Db 84 RRAPQTGIVDECCFRSCDLRLRLMYCAPLKP 114

RESULT 15

B40912
 Insulin-like growth factor I precursor form 2 - rat.

C:Species: Rattus norvegicus (Norway rat)

C>Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999

C:Accession: B40912

R:Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.

Mol. Endocrinol. 1, 243-248, 1987

A:Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu

c tissues.

A:Reference number: A40912; MUID:88288198; PMID:3453891

A:Accession: B40912

A:Status: preliminary

A:Molecule type: mRNA

A:Residues: 1-127 <ROB>

A:Cross-references: GB:M15481; NID:G204753; PID:AAA41387.1; PID:G204754

C:Superfamily: insulin

Query Match 30.6%; Score 26; DB 2; Length 127;
 Best Local Similarity 100.0%; Pred. No. 2.2e-19;
 Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 11 RRAPQTGIVDECCFRSCDLRLRLMYC 36
 |||||
 Db 58 RRAPQTGIVDECCFRSCDLRLRLMYC 83

RESULT 16

A40912
 Insulin-like growth factor I precursor form 1 - rat

C:Species: Rattus norvegicus (Norway rat)

C>Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999

C:Accession: A40912

R:Roberts Jr., C.T.; Lasky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.

Mol. Endocrinol. 1, 243-248, 1987

A:Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu

c tissues.

A:Reference number: A40912; MUID:88288198; PMID:3453891

A:Accession: A40912

A:Status: preliminary

A:Molecule type: mRNA

A:Residues: 1-133 <ROB>

A:Cross-references: GB:M15480; NID:G204749; PID:AAA41385.1; PID:G204750

C:Superfamily: insulin

Query Match 30.6%; Score 26; DB 2; Length 133;
 Best Local Similarity 100.0%; Pred. No. 2.3e-19;
 Matches 26; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 11 RRAPQTGIVDECCFRSCDLRLRLMYC 36
 |||||
 Db 58 RRAPQTGIVDECCFRSCDLRLRLMYC 83

RESULT 17

A36079

Insulin-like growth factor I', precursor - African clawed frog

C:Species: Xenopus laevis (African clawed frog)

C>Date: 30-Nov-1990 #sequence_revision 30-Nov-1990 #text_change 16-Jul-1999

C:Accession: A36079; B34049

R:Kajimoto, Y.; Rotwein, P.

Mol. Endocrinol. 4, 217-226, 1990

A:Title: Evolution of insulin-like growth factor I (IGF-I): structure and expression of

A:Reference number: A36079; MUID:90231335; PMID:2330002

A:Accession: A36079

A:Molecule type: mRNA

A:Residues: 1-153 <KAJ>

A:Cross-references: GB:M29857; NID:G214287; PID:AAA70330.1; PID:G214288

R:Shuldiner, A.R.; Nirula, A.; Scott, L.A.; Roth, J.

Biochem. Biophys. Res. Commun. 166, 223-230, 1990

A:Title: Evidence that Xenopus laevis contains two different nonallelic insulin-like gro

A:Reference number: A30158; MUID:90147704; PMID:2302204

A:Accession: B34049

A:Molecule type: DNA

A:Residues: 82-85, 'A', 87-125 <SH2>

C:Genetics:

A:Gene: IGF-I'

C:Superfamily: insulin

C:Keywords: growth factor

Query Match 22.4%; Score 19; DB 2; Length 153;
 Best Local Similarity 100.0%; Pred. No. 4.3e-12;
 Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 40 KPAKSARSYRAQRHTDMPK 58
 |||||
 Db 113 KPAKSARSYRAQRHTDMPK 131

RESULT 18

A41399

Insulin-like growth factor IA precursor - chicken

C:Species: Gallus gallus (chicken)

C>Date: 03-Apr-1992 #sequence_revision 03-Apr-1992 #text_change 16-Jul-1999

C:Accession: A41399; A61092; A40012; B60853; A37415

R:Kajimoto, Y.; Rotwein, P.

Mol. Endocrinol. 3, 1907-1913, 1989

A:Title: Structure and expression of a chicken insulin-like growth factor I precursor.

A:Reference number: A41399; MUID:90190648; PMID:2628728

A:Accession: A41399

A:Molecule type: mRNA

A:Residues: 1-153 <KAJ>

A:Cross-references: GB:M32791; NID:G211950; PID:AAA48828.1; PID:G211951

R:Farwell, D.H.; Bulfield, G.

J. Mol. Endocrinol. 4, 201-211, 1990

A:Title: Molecular cloning, sequence analysis and expression of putative chicken insulin-

A:Reference number: A61092; MUID:90334699; PMID:2378674

A:Accession: A61092

A:Status: not compared with conceptual translation

A:Molecule type: mRNA

A:Residues: 1-153 <FAW>

A:Reference number: A40012; MUID:91236750; PMID:2033062

A:Accession: A40012

A:Status: preliminary

A:Molecule type: DNA

A:Residues: 1-21 <KAJ>

A:Cross-references: GB:M74176; NID:G211952; PID:AAA48829.1; PID:G211953

R:Lawe, S.R.; Francis, G.L.; McNamara, P.J.; Wallace, J.C.; Ballard, F.J.

J. Endocrinol. 117, 173-181, 1988

A:Title: Purification, partial sequences and properties of chicken insulin-like growth f

A:Reference number: A60853; MUID:88244560; PMID:3379351

A:Accession: B60853

A:Molecule type: protein

A:Residues: 49-79 <DAW>

R:Ballard, F.J.; Johnson, R.J.; Owens, P.C.; Francis, G.L.; Upton, F.M.; McMurtry, J.P.;

Gen. Comp. Endocrinol. 79, 459-468, 1990

A:Title: Chicken insulin-like growth factor-I: amino acid sequence, radioimmunoassay, and

A:Reference number: A37415; MUID:91106695; PMID:2272467

A:Accession: A37415
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 49-118 <BAL>
 C:Superfamily: insulin
 C:Keywords: growth factor
 F:49-77,90-110/Product: insulin-like growth factor IA #status experimental <MAT>
 F:49-77/Domains: insulin-like growth factor IA B chain #status predicted <CHB>
 F:78-89/Domains: insulin-like growth factor I, splice form 1 #status experimental <CPE>
 F:90-110/Domains: insulin-like growth factor IA A chain #status experimental <CHA>
 F:111-118/Domains: D peptide #status experimental <MA>
 F:119-153/Domains: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

Query Match 18.8%; Score 16; DB 2; Length 153;
 Best Local Similarity 100.0%; Pred. No. 5.3e-09;
 Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 43 KARSVRAQRHTDMPX 58
 |||||
 DB 116 KARSVRAQRHTDMPX 131

RESULT 19
 D54270
 Insulin-like growth factor-I precursor (clone OtIGFI-0) - chinook salmon
 C:Species: Oncorhynchus tshawytscha (chinook salmon)
 C:Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 16-Jul-1999
 C:Accession: D54270
 R:Wallis, A.E.; Devlin, R.H.
 Mol. Endocrinol. 7, 409-422, 1993
 A:Title: Duplicate insulin-like growth factor-I genes in salmon display alternative splicing
 A:Reference number: A54270; PMID:93247592; PMID:7683374
 A:Accession: D54270
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-149 <MAL>
 A:Cross-references: GB:U15962; GB:SS9515; NID:G559010; PIDN:AAA67268.1; PID:G559011
 A:Title: sequence extracted from NCBI backbone (NCBIN:130890, NCBIPI:130894)
 C:Superfamily: insulin

Query Match 15.3%; Score 13; DB 2; Length 149;
 Best Local Similarity 100.0%; Pred. No. 6.4e-06;
 Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
 |||||
 DB 114 ARSVRAQRHTDMP 126

RESULT 20
 C44012
 Insulin-like growth factor I precursor, splice form 3 - coho salmon (fragment)
 N:Contains: insulin-like growth factor I, splice form 1; insulin-like growth factor I, splice form 2
 C:Species: Oncorhynchus kisutch (coho salmon)
 C:Date: 27-Apr-1993 #sequence_revision 27-Apr-1993 #text_change 16-Jul-1999
 C:Accession: C44012; A44012; B44012
 R:Duguay, S.J.; Park, L.K.; Samadpour, M.; Dickhoff, W.W.
 Mol. Endocrinol. 6, 1202-1210, 1992
 A:Title: Nucleotide sequence and tissue distribution of three insulin-like growth factor I genes
 A:Reference number: A44012; PMID:93024477; PMID:1406698
 A:Accession: C44012
 A:Status: preliminary; not compared with conceptual translation
 A:Molecule type: mRNA
 A:Residues: 1-155 <DUG>
 A:Cross-references: GB:M81913; NID:G213442; PIDN:AAA9413.1; PID:G213443
 A:Note: sequence extracted from NCBI backbone (NCBIPI:115177)
 C:Genetics:
 A:Gene: IGF-I
 C:Superfamily: insulin
 C:Keywords: growth factor

Query Match 15.3%; Score 13; DB 2; Length 155;
 Best Local Similarity 100.0%; Pred. No. 6.6e-06;

Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
 |||||
 DB 88 ARSVRAQRHTDMP 100

RESULT 21
 C54270
 Insulin-like growth factor-I precursor (clone OtIGFI-36) - chinook salmon
 C:Species: Oncorhynchus tshawytscha (chinook salmon)
 C:Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 16-Jul-1999
 C:Accession: C54270
 R:Wallis, A.E.; Devlin, R.H.
 Mol. Endocrinol. 7, 409-422, 1993
 A:Title: Duplicate insulin-like growth factor-I genes in salmon display alternative splicing
 A:Reference number: A54270; PMID:93247592; PMID:7683374
 A:Accession: C54270
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-161 <MAL>
 A:Cross-references: GB:U15961; GB:SS9514; NID:G559008; PIDN:AAA67267.1; PID:G559009
 A:Note: sequence extracted from NCBI backbone (NCBIN:130889, NCBIPI:130893)
 C:Superfamily: insulin

Query Match 15.3%; Score 13; DB 2; Length 161;
 Best Local Similarity 100.0%; Pred. No. 6.8e-06;
 Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
 |||||
 DB 114 ARSVRAQRHTDMP 126

RESULT 22
 A41396
 Insulin-like growth factor I precursor, splice form 2 - coho salmon
 N:Contains: insulin-like growth factor I, splice form 1
 C:Species: Oncorhynchus kisutch (coho salmon)
 C:Date: 03-Apr-1992 #sequence_revision 03-Apr-1992 #text_change 21-Jul-2000
 C:Accession: A41396; I51255; A44012; B44012
 R:Cao, Q.P.; Duguay, S.J.; Plisetkaya, E.; Steiner, D.F.; Chan, S.J.
 Mol. Endocrinol. 3, 2005-2010, 1989
 A:Title: Nucleotide sequence and growth hormone-regulated expression of salmon insulin I
 A:Reference number: A41396; PMID:90190659; PMID:2628735
 A:Accession: A41396
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-176 <CNO>
 A:Cross-references: GB:M32792; NID:G213431; PIDN:AAA9410.1; PID:G213432
 R:Koval, A.; Kullik, V.; Duguay, S.; Plisetkaya, E.; Adamo, M.L.; Roberts, C.T.
 DNA Cell Biol. 13, 1057-1062, 1994
 A:Title: Characterization of a salmon insulin-like growth factor I promoter.
 A:Reference number: I51255; PMID:95032736; PMID:7945938
 A:Accession: I51255
 A:Status: translated from GB/EMBL/DBS
 A:Molecule type: DNA
 A:Residues: 1-5, 7-16 <KOV>
 A:Cross-references: GB:S74130; NID:G707007; PIDN:AA41418.1; PID:G4261848
 R:Duguay, S.J.; Park, L.K.; Samadpour, M.; Dickhoff, W.W.
 Mol. Endocrinol. 6, 1202-1210, 1992
 A:Title: Nucleotide sequence and tissue distribution of three insulin-like growth factor I genes
 A:Reference number: A44012; PMID:93024477; PMID:1406698
 A:Accession: A44012
 A:Status: preliminary; not compared with conceptual translation
 A:Molecule type: mRNA
 A:Residues: 27-130,158-169 <DUG>
 A:Cross-references: GB:M81911; NID:G213438; PIDN:AA59947.1; PID:G213439
 A:Note: sequence extracted from NCBI backbone (NCBIPI:115183)
 A:Accession: B44012
 A:Status: preliminary; not compared with conceptual translation
 A:Molecule type: mRNA
 A:Residues: 27-169 <DUG>

A:Cross-references: GB:M81912; NID:G213440; PIDN:AAB59948.1; PID:G213441
A>Note: sequence extracted from NCBI backbone (NCBIP:115182)

C:Genetics:
A:Gene: IGF-I
C:Superfamily: insulin
C:Keywords: growth factor

Query Match 15.3%: Score 13; DB 2; Length 176;
Best Local Similarity 100.0%; Pred. No. 7.3e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
|||
114 ARSVRAQRHTDMP 126

RESULT 23

A46244
insulin-like growth factor I precursor - rainbow trout
C:Species: Oncorhynchus mykiss (rainbow trout)
C>Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 16-Jul-1999
C:Accession: A46244
R:Shambolt, M.J.; Chen, T.T.
Proc. Natl. Acad. Sci. U.S.A. 89, 8913-8917, 1992
A:Title: Identification of a second insulin-like growth factor in a fish species.
A:Reference number: A46244; WUID:93028377; PMID:1409585
A:Accession: A46244
A>Status: preliminary
A:Molecule type: nucleic acid
A:Residues: 1-176 <SHA>
A:Cross-references: GB:M95183; NID:G213435; PIDN:AAA49412.1; PID:G213436
A:Experimental source: liver
A>Note: sequence extracted from NCBI backbone (NCBIN:115350, NCBIP:115352)
C:Superfamily: insulin

Query Match 15.3%: Score 13; DB 2; Length 176;
Best Local Similarity 100.0%; Pred. No. 7.3e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
|||
114 ARSVRAQRHTDMP 126

RESULT 24

A54270
insulin-like growth factor-I precursor (clone OIGFI-117A) - chinook salmon
C:Species: Oncorhynchus tshawytscha (chinook salmon)
C>Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 30-May-1997
C:Accession: A54270
R:Wallis, A.E.; Devlin, R.H.
Mol. Endocrinol. 7, 409-422, 1993
A:Title: Duplicate insulin-like growth factor-I genes in salmon display alternative splicing.
A:Reference number: A54270; WUID:93247592; PMID:7683374
A:Accession: A54270
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-188 <NAL>
A>Note: sequence extracted from NCBI backbone (NCBIN:130887, NCBIP:130891)
C:Superfamily: insulin

Query Match 15.3%: Score 13; DB 2; Length 188;
Best Local Similarity 100.0%; Pred. No. 7.7e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
|||
114 ARSVRAQRHTDMP 126

RESULT 25

B54270
insulin-like growth factor-I precursor (clone OIGFI-117B) - chinook salmon

C:Species: Oncorhynchus tshawytscha (chinook salmon)
C>Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 30-May-1997
C:Accession: B54270

R:Wallis, A.E.; Devlin, R.H.
Mol. Endocrinol. 7, 409-422, 1993
A:Title: Duplicate insulin-like growth factor-I genes in salmon display alternative splicing.
A:Reference number: A54270; WUID:93247592; PMID:7683374
A:Accession: B54270

A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-188 <NAL>
A>Note: sequence extracted from NCBI backbone (NCBIN:130888, NCBIP:130892)
C:Superfamily: insulin

Query Match 15.3%: Score 13; DB 2; Length 188;
Best Local Similarity 100.0%; Pred. No. 7.7e-06;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 45 ARSVRAQRHTDMP 57
|||
114 ARSVRAQRHTDMP 126

Search completed: Match 3, 2004, 11:55:13
Job time : 21 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: March 3, 2004, 11:54:45 ; Search time 34 Seconds
(without alignments)
527.883 Million cell updates/sec

Title: US-09-852-261-2_COPY_26_110

Perfect score: 85

Sequence: 1 NKPTGYSSSRRAFGTQIVD.....STNNTKSORRKGSTFEHKK 85

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 809742 seqs, 21153259 residues

Word size : 0

Total number of hits satisfying chosen parameters: 809742

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Listing first 100 summaries

Database : Published Applications AA:*

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11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/1/pubpaa/US09C_NEW_PUB.pep:*
13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
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16: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
17: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
18: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No	Score	Query Match	Length	ID	Description
1	85	100.0	110	9	US-09-852-261-2
2	78	91.8	195	15	US-10-443-466A-20
3	61	71.8	105	9	US-09-852-261-10
4	61	71.8	137	14	US-10-251-661-8
5	61	71.8	153	9	US-09-919-497-74
6	61	71.8	153	14	US-10-136-639-3
7	61	71.8	153	14	US-10-207-655-55
8	58	68.2	105	14	US-10-238-114-3
9	58	68.2	153	14	US-10-238-114-2
10	45	52.9	70	9	US-09-848-664-29
11	45	52.9	70	9	US-09-848-664-30
12	45	52.9	70	9	US-09-903-327A-8
13	45	52.9	70	10	US-09-858-935B-3
14	45	52.9	70	13	US-10-028-410-1
15	45	52.9	70	13	US-10-066-009A-1

16	45	52.9	70	14	US-10-136-639-1	Sequence 1, Appli
17	45	52.9	70	14	US-10-136-841-7	Sequence 7, Appli
18	45	52.9	70	14	US-10-444-326-1	Sequence 1, Appli
19	45	52.9	70	15	US-10-272-531A-7	Sequence 7, Appli
20	45	52.9	70	15	US-10-272-463A-7	Sequence 7, Appli
21	45	52.9	70	16	US-10-444-262-1	Sequence 1, Appli
22	45	52.9	91	14	US-10-323-046-42	Sequence 42, Appli
23	45	52.9	118	14	US-10-179-046-14	Sequence 14, Appli
24	45	52.9	155	14	US-09-921-398-39	Sequence 39, Appli
25	45	52.9	155	14	US-10-280-826-19	Sequence 19, Appli
26	45	52.9	191	9	US-09-921-398-41	Sequence 41, Appli
27	45	52.9	191	14	US-10-280-826-41	Sequence 41, Appli
28	45	52.9	510	9	US-09-903-327A-12	Sequence 12, Appli
29	45	52.9	953	14	US-10-241-596-14	Sequence 14, Appli
30	43	50.6	105	9	US-09-852-261-14	Sequence 14, Appli
31	43	50.6	111	9	US-09-852-261-6	Sequence 6, Appli
32	31	36.5	68	14	US-10-339-740-218	Sequence 218, App
33	31	36.5	133	14	US-10-161-088-2	Sequence 2, Appli
34	26	30.6	105	9	US-09-852-261-12	Sequence 12, Appli
35	26	30.6	111	9	US-09-852-261-4	Sequence 4, Appli
36	24	28.2	46	9	US-09-205-658-138	Sequence 138, App
37	24	28.2	46	9	US-09-205-658-139	Sequence 139, App
38	24	28.2	46	10	US-09-963-663-138	Sequence 138, App
39	24	28.2	46	10	US-09-963-663-139	Sequence 139, App
40	24	28.2	56	13	US-10-066-009A-5	Sequence 5, Appli
41	21	24.7	29	14	US-10-279-061-86	Sequence 86, Appli
42	21	24.7	103	14	US-10-279-061-72	Sequence 72, Appli
43	21	24.7	103	14	US-10-279-061-82	Sequence 82, Appli
44	21	24.7	131	14	US-10-279-061-88	Sequence 88, Appli
45	15	17.6	18	15	US-10-016-5659A-16	Sequence 16, Appli
46	15	17.6	18	15	US-10-308-644-16	Sequence 16, Appli
47	12	14.1	12	15	US-10-016-5659A-15	Sequence 15, Appli
48	12	14.1	12	15	US-10-308-644-15	Sequence 15, Appli
49	9	10.6	9	15	US-10-215-272-39	Sequence 39, Appli
50	9	10.6	46	9	US-09-205-658-140	Sequence 140, App
51	9	10.6	46	9	US-09-205-658-141	Sequence 141, App
52	9	10.6	46	10	US-09-963-663-140	Sequence 140, App
53	9	10.6	46	10	US-09-963-663-141	Sequence 141, App
54	9	10.6	67	13	US-10-066-009A-2	Sequence 2, Appli
55	9	10.6	67	14	US-10-136-639-2	Sequence 2, Appli
56	9	10.6	67	14	US-10-136-841-8	Sequence 8, Appli
57	9	10.6	67	15	US-10-272-531A-8	Sequence 8, Appli
58	9	10.6	67	15	US-10-272-463A-8	Sequence 8, Appli
59	9	10.6	70	14	US-10-136-841-4	Sequence 4, Appli
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61	9	10.6	70	15	US-10-272-463A-4	Sequence 4, Appli
62	9	10.6	80	15	US-10-215-272-20	Sequence 20, Appli
63	9	10.6	156	9	US-09-972-809-7	Sequence 7, Appli
64	9	10.6	180	14	US-10-081-119-38	Sequence 38, Appli
65	9	10.6	180	14	US-10-136-841-2	Sequence 2, Appli
66	9	10.6	180	14	US-10-097-340-145	Sequence 145, App
67	9	10.6	180	14	US-10-207-655-57	Sequence 57, App
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69	9	10.6	180	15	US-10-272-531A-2	Sequence 2, Appli
70	9	10.6	180	15	US-10-173-999-99	Sequence 99, Appli
71	9	10.6	180	15	US-10-258-666-2	Sequence 2, Appli
72	9	10.6	180	15	US-10-272-463A-2	Sequence 2, Appli
73	9	10.6	180	15	US-10-443-466A-21	Sequence 21, Appli
74	9	10.6	722	14	US-10-136-841-6	Sequence 6, Appli
75	9	10.6	722	15	US-10-272-531A-6	Sequence 6, Appli
76	9	10.6	722	15	US-10-272-463A-6	Sequence 6, Appli
77	8	9.4	769	16	US-10-389-566-2317	Sequence 2317, Ap
78	8	9.4	772	16	US-10-389-566-1451	Sequence 1451, Ap
79	8	9.4	772	16	US-10-389-566-1512	Sequence 1512, Ap
80	7	8.2	7	15	US-10-440-799-3	Sequence 2, Appli
81	7	8.2	9	15	US-10-215-272-40	Sequence 40, Appli
82	7	8.2	12	15	US-10-360-101-184	Sequence 184, App
83	7	8.2	20	14	US-10-339-740-126	Sequence 126, App
84	7	8.2	46	9	US-09-205-658-144	Sequence 144, App
85	7	8.2	46	9	US-09-205-658-145	Sequence 145, App
86	7	8.2	46	10	US-09-963-663-144	Sequence 144, App
87	7	8.2	46	10	US-09-963-663-145	Sequence 145, App
88	7	8.2	127	9	US-09-430-221-2	Sequence 2, Appli

89 7 8.2 127 14 US-10-324-023-2 Sequence 2, Appli
90 7 8.2 235 16 US-10-389-566-2342 Sequence 2342, Ap
91 7 8.2 399 15 US-10-094-749-1978 Sequence 1978, Ap
92 7 8.2 429 16 US-10-389-566-1317 Sequence 1317, Ap
93 7 8.2 469 15 US-10-369-493-212 Sequence 212, App
94 7 8.2 470 16 US-10-389-566-1031 Sequence 1031, Ap
95 7 8.2 470 16 US-10-389-566-2007 Sequence 2007, Ap
96 7 8.2 484 9 US-09-828-313-32 Sequence 32, Appl
97 7 8.2 838 9 US-09-712-363-150 Sequence 150, App
98 7 8.2 838 14 US-10-219-219-4 Sequence 4, Appl
99 7 8.2 1391 15 US-10-369-493-6932 Sequence 6932, Ap
100 6 7.1 9 15 US-10-215-272-742 Sequence 42, Appl

ALIGNMENTS

RESULT 1
US-09-852-261-2
Sequence 2, Application US/09852261
Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPIK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 110
TYPE: PRT
ORGANISM: Homo sapiens
US-09-852-261-2
Query Match 100.0%; Score 85; DB 9; Length 110;
Best Local Similarity 100.0%; Pred. No. 5e-76;
Matches 85; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 NKPTGYSSRRAPOTGIYDECCFRSCDRLRLMYCAPLKPAAKSARSVAQRHTDMPKTO 60
DB 26 NKPTGYSSRRAPOTGIYDECCFRSCDRLRLMYCAPLKPAAKSARSVAQRHTDMPKTO 85
QY 61 KYOPSTNKTKSQRRKSGSTFEHK 85
DB 86 KYOPSTNKTKSQRRKSGSTFEHK 110
RESULT 2
US-10-443-466A-20
Sequence 20, Application US/10443466A
Publication No. US20040018191A1
GENERAL INFORMATION:
APPLICANT: Wang, Yan
APPLICANT: Pachter, Jonathan A
APPLICANT: Hailey, Judith
APPLICANT: Greenberg, Robert
APPLICANT: Leonard, Presta
APPLICANT: Brams, Peter
APPLICANT: Feingersh, Diane
APPLICANT: Williams, Denise
APPLICANT: Srinivasan, Mohan
TITLE OF INVENTION: NEUTRALIZING HUMAN ANTI-TIGER ANTIBODY
FILE REFERENCE: OC01533-K-US
CURRENT APPLICATION NUMBER: US/10/443,466A
CURRENT FILING DATE: 2003-05-22
PRIOR APPLICATION NUMBER: 60/383,459
PRIOR FILING DATE: 2002-05-24
PRIOR APPLICATION NUMBER: 60/393,214
PRIOR FILING DATE: 2002-07-02

PRIOR APPLICATION NUMBER: 60/436,254
PRIOR FILING DATE: 2002-12-23
NUMBER OF SEQ ID NOS: 120
SOFTWARE: PatentIn version 3.1
SEQ ID NO 20
LENGTH: 195
TYPE: PRT
ORGANISM: Homo sapiens
US-10-443-466A-20
Query Match 91.8%; Score 78; DB 15; Length 195;
Best Local Similarity 100.0%; Pred. No. 6.2e-69;
Matches 78; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 NKPTGYSSRRAPOTGIYDECCFRSCDRLRLMYCAPLKPAAKSARSVAQRHTDMPKTO 60
DB 74 NKPTGYSSRRAPOTGIYDECCFRSCDRLRLMYCAPLKPAAKSARSVAQRHTDMPKTO 133
QY 61 KYOPSTNKTKSQRRKG 78
DB 134 KYOPSTNKTKSQRRKG 151
RESULT 3
US-09-852-261-10
Sequence 10, Application US/09852261
Patent No. US20020083477A1
GENERAL INFORMATION:
APPLICANT: GOLDSPIK, GEOFFREY
APPLICANT: TERENGHI, GIORGIO
TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
FILE REFERENCE: 117-351
CURRENT APPLICATION NUMBER: US/09/852,261
CURRENT FILING DATE: 2001-05-10
PRIOR APPLICATION NUMBER: GB 0011278.9
PRIOR FILING DATE: 2000-05-10
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 10
LENGTH: 105
TYPE: PRT
ORGANISM: Homo sapiens
US-09-852-261-10
Query Match 71.8%; Score 61; DB 9; Length 105;
Best Local Similarity 100.0%; Pred. No. 2e-52;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 NKPTGYSSRRAPOTGIYDECCFRSCDRLRLMYCAPLKPAAKSARSVAQRHTDMPKTO 60
DB 26 NKPTGYSSRRAPOTGIYDECCFRSCDRLRLMYCAPLKPAAKSARSVAQRHTDMPKTO 85
QY 61 K 61
DB 86 K 86
RESULT 4
US-10-251-661-8
Sequence 8, Application US/10251661
Publication No. US2003016655A1
GENERAL INFORMATION:
APPLICANT: Bear, Mark P.
APPLICANT: Alberini, Cristina M.
TITLE OF INVENTION: Methods and Compositions for Regulating
TITLE OF INVENTION: Memory Consolidation
FILE REFERENCE: 3499.1001-003
CURRENT APPLICATION NUMBER: US/10/251,661
CURRENT FILING DATE: 2002-09-20
PRIOR APPLICATION NUMBER: 60/193,614
PRIOR FILING DATE: 2000-03-31
PRIOR APPLICATION NUMBER: PCT/US01/10661
PRIOR FILING DATE: 2001-04-02

NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 8
LENGTH: 137
TYPE: PRT
ORGANISM: Homo sapiens
US-10-251-661-8

Query Match
Best Local Similarity 71.8%; Score 61; DB 14; Length 137;
Best Local Similarity 100.0%; Pred. No. 2.7e-52;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 60
Db 58 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 117

Qy 61 K 61
Db 118 K 118

RESULT 5
US-09-919-497-74
Sequence 74, Application US/09919497
Patent No. US2002010662A1
GENERAL INFORMATION:
APPLICANT: Muller, George L.
TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
FILE REFERENCE: B0801/7225
CURRENT APPLICATION NUMBER: US/09/919,497
PRIOR FILING DATE: 2001-07-31
PRIOR APPLICATION NUMBER: US 60/221,735
NUMBER OF SEQ ID NOS: 100
SOFTWARE: PatentIn version 3.0
SEQ ID NO 74
LENGTH: 153
TYPE: PRT
ORGANISM: Homo sapiens
US-09-919-497-74

Query Match
Best Local Similarity 71.8%; Score 61; DB 9; Length 153;
Best Local Similarity 100.0%; Pred. No. 2.7e-52;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 60
Db 74 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 133

Qy 61 K 61
Db 134 K 134

RESULT 6
US-10-136-639-3
Sequence 3, Application US/10136639
Publication No. US20030072761A1
GENERAL INFORMATION:
APPLICANT: Lebowitz, Jonathan
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD
FILE REFERENCE: SYM-008
CURRENT APPLICATION NUMBER: US/10/136,639
PRIOR FILING DATE: 2002-09-06
PRIOR APPLICATION NUMBER: US 60/329,650
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn version 3.0
SEQ ID NO 3
LENGTH: 153
TYPE: PRT
ORGANISM: Homo sapiens

Query Match
Best Local Similarity 71.8%; Score 61; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 2.7e-52;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 60
Db 74 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 133

Qy 61 K 61
Db 134 K 134

US-10-136-639-3

Query Match
Best Local Similarity 71.8%; Score 61; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 2.7e-52;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 60
Db 74 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 133

Qy 61 K 61
Db 134 K 134

RESULT 7
US-10-207-655-55
Sequence 55, Application US/10207655
Publication No. US20030118592A1
GENERAL INFORMATION:
APPLICANT: Ledbetter, Jeffrey A.
TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
FILE REFERENCE: 390069,401C1
CURRENT APPLICATION NUMBER: US/10/207,655
PRIOR FILING DATE: 2002-07-25
NUMBER OF SEQ ID NOS: 426
SOFTWARE: PatentIn version 3.0
SEQ ID NO 55
LENGTH: 153
TYPE: PRT
ORGANISM: Homo sapiens
US-10-207-655-55

Query Match
Best Local Similarity 71.8%; Score 61; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 2.7e-52;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 60
Db 74 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 133

Qy 61 K 61
Db 134 K 134

RESULT 8
US-10-238-114-3
Sequence 3, Application US/10238114
Publication No. US20030100073A1
GENERAL INFORMATION:
APPLICANT: Marial
TITLE OF INVENTION: ANDREONI, Christine Michele
FILE REFERENCE: 454313-3165.1
CURRENT APPLICATION NUMBER: US/10/238,114
PRIOR FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: FR 01 11736
PRIOR FILING DATE: 2001-09-11
PRIOR APPLICATION NUMBER: US 60/318,666
PRIOR FILING DATE: 2001-09-12
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 105
TYPE: PRT
ORGANISM: Felis catus
US-10-238-114-3

Query Match
Best Local Similarity 68.2%; Score 58; DB 14; Length 105;
Best Local Similarity 100.0%; Pred. No. 1.8e-49;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 60
Db 74 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAKSARSVRAQRHTDMPKQ 133

Qy 61 K 61
Db 134 K 134

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 58
DB 26 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 83

RESULT 9
US-10-238-114-2
Sequence 2, Application US/10238114
Publication No. US20030100073A1
GENERAL INFORMATION:
APPLICANT: Meril
APPLICANT: ANDREONI, Christine Michele
TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE RE
FILE REFERENCE: 454313-3165.1
CURRENT APPLICATION NUMBER: US/10/238,114
CURRENT FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: FR 01 11736
PRIOR FILING DATE: 2001-09-11
PRIOR APPLICATION NUMBER: US 60/318,666
PRIOR FILING DATE: 2001-09-12
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.1
SEQ ID NO 2
LENGTH: 153
TYPE: PRT
ORGANISM: Felis catus
US-10-238-114-2

Query Match 68.2%; Score 58; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 2.5e-49;
Matches 58; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 58
DB 74 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 131

RESULT 10
US-09-848-664-29
Sequence 29, Application US/09848664
Patent No. US20020146414A1
GENERAL INFORMATION:
APPLICANT: Sakiyama-Elbert, Shelly E.
APPLICANT: Hubbell, Jeffrey A.
TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growth
FILE REFERENCE: ETH 108
CURRENT APPLICATION NUMBER: US/09/848,664
CURRENT FILING DATE: 2001-05-03
PRIOR APPLICATION NUMBER: 09/298,084
PRIOR FILING DATE: 1999-04-22
NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 29
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-09-848-664-29

Query Match 52.9%; Score 45; DB 9; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 45
DB 26 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 70

RESULT 11
US-09-848-664-30
Sequence 30, Application US/09848664
Patent No. US20020146414A1

GENERAL INFORMATION:
APPLICANT: Sakiyama-Elbert, Shelly E.
APPLICANT: Hubbell, Jeffrey A.
TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growth
FILE REFERENCE: ETH 108
CURRENT APPLICATION NUMBER: US/09/848,664
CURRENT FILING DATE: 2001-05-03
PRIOR APPLICATION NUMBER: 09/298,084
PRIOR FILING DATE: 1999-04-22
NUMBER OF SEQ ID NOS: 31
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 30
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-09-848-664-30

Query Match 52.9%; Score 45; DB 9; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 45
DB 26 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 70

RESULT 12
US-09-903-327A-8
Sequence 8, Application US/09903327A
Patent No. US2002016433A1
GENERAL INFORMATION:
APPLICANT: Nemerow, Glen R.
APPLICANT: Li, Eryang
TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TAR
TITLE OF INVENTION: GENE
FILE REFERENCE: 22908-1228
CURRENT APPLICATION NUMBER: US/09/903,327A
CURRENT FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: 09/613,017
PRIOR FILING DATE: 2000-07-10
NUMBER OF SEQ ID NOS: 33
SOFTWARE: PatsEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 70
TYPE: PRT
ORGANISM: Human
FEATURE:
NAME/KEY: PEPTIDE
LOCATION: (0)...(0)
OTHER INFORMATION: Human Insulin-like Growth Factor 1 sequence
OTHER INFORMATION: (IGF-1, mature peptide)
US-09-903-327A-8

Query Match 52.9%; Score 45; DB 9; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 45
DB 26 NKPTGYGSSRRAPQGTGIVDECCFRSCDRLRLMYCAPLKPASASVVAQHTDMPK 70

RESULT 13
US-09-858-935B-3
Sequence 3, Application US/09858935B
Publication No. US20030069177A1
GENERAL INFORMATION:
APPLICANT: Dubague, Yves
APPLICANT: Filvaroff, Ellen
APPLICANT: Lowman, Henry B.
TITLE OF INVENTION: METHOD FOR TREATING CARTILAGE DISORDERS

```
FILE REFERENCE: P1794R1
; CURRENT APPLICATION NUMBER: US/09/858,935B
; CURRENT FILING DATE: 2002-07-02
; PRIOR APPLICATION NUMBER: US 60/248,985
; PRIOR FILING DATE: 2000-11-15
; PRIOR APPLICATION NUMBER: US 60/204,490
; PRIOR FILING DATE: 2000-05-16
; NUMBER OF SEQ ID NOS: 153
; SEQ ID NO 3
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-858-935B-3

Query Match          52.9%; Score 45; DB 10; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 45
DB 26 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 70

RESULT 14
US-10-028-410-1
; Sequence 1, Application US/10028410
; Publication No. US20020160955A1
; GENERAL INFORMATION:
; APPLICANT: Dubaigle, Yves
; APPLICANT: Lowman, Henry
; TITLE OF INVENTION: PROTEIN VARIANTS
; FILE REFERENCE: P1712R1-1
; CURRENT APPLICATION NUMBER: US/10/028,410
; CURRENT FILING DATE: 2001-12-19
; PRIOR APPLICATION NUMBER: US/09/477,924
; PRIOR FILING DATE: 2000-01-05
; NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-028-410-1

Query Match          52.9%; Score 45; DB 13; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 45
DB 26 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 70

RESULT 15
US-10-066-009A-1
; Sequence 1, Application US/10066009A
; Publication No. US20020165155A1
; GENERAL INFORMATION:
; APPLICANT: Schaffner, Michelle
; APPLICANT: Ullrich, Mark
; APPLICANT: Vajdos, Felix
; TITLE OF INVENTION: CRYSTALLIZATION OF IGF-1
; FILE REFERENCE: P1869R1
; CURRENT APPLICATION NUMBER: US/10/066,009A
; CURRENT FILING DATE: 2002-06-24
; PRIOR APPLICATION NUMBER: US 60/287,072
; PRIOR FILING DATE: 2001-04-27
; PRIOR APPLICATION NUMBER: US 60/267,977
; PRIOR FILING DATE: 2001-02-09
; NUMBER OF SEQ ID NOS: 5
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens

US-10-066-009A-1

Query Match          52.9%; Score 45; DB 13; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 45
DB 26 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 70

RESULT 16
US-10-136-639-1
; Sequence 1, Application US/10136639
; Publication No. US20030072761A1
; GENERAL INFORMATION:
; APPLICANT: Lebowitz, Jonathan
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD I
; FILE REFERENCE: SYM-008
; CURRENT APPLICATION NUMBER: US/10/136,639
; CURRENT FILING DATE: 2002-09-06
; PRIOR APPLICATION NUMBER: US 60/329,650
; PRIOR FILING DATE: 2001-10-16
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-136-639-1

Query Match          52.9%; Score 45; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 45
DB 26 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 70

RESULT 17
US-10-136-841-7
; Sequence 7, Application US/10136841
; Publication No. US20030082176A1
; GENERAL INFORMATION:
; APPLICANT: Lebowitz, Jonathan
; APPLICANT: Beverley, Stephen
; TITLE OF INVENTION: SUBCELLULAR TARGETING OF THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-007
; CURRENT APPLICATION NUMBER: US/10/136,841
; CURRENT FILING DATE: 2002-08-22
; PRIOR APPLICATION NUMBER: US 60/287,531
; PRIOR FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: US 60/304,609
; PRIOR FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: US 60/329,461
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 60/351,276
; PRIOR FILING DATE: 2002-01-23
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 7
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-136-841-7

Query Match          52.9%; Score 45; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLRLEMYCAPLKPAKSA 45
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Db 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 70

RESULT 18
US-10-444-326-1
; Sequence 1, Application US/10444326
; Publication No. US20030191065A1
; GENERAL INFORMATION:
; APPLICANT: Dubaquié, Yves
; APPLICANT: Lomman, Henry
; TITLE OF INVENTION: PROTEIN VARIANTS
; FILE REFERENCE: P1712R1
; CURRENT APPLICATION NUMBER: US/10/444,326
; CURRENT FILING DATE: 2003-05-22
; PRIOR APPLICATION NUMBER: US/09/723,866
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US/09/477,923
; PRIOR FILING DATE: 2000-01-05
; NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-444-326-1

Query Match 52.9%; Score 45; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 45
Db 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 70

RESULT 19
US-10-272-531A-7
; Sequence 7, Application US/10272531A
; Publication No. US20040005309A1
; GENERAL INFORMATION:
; APPLICANT: Lebowitz, Jonathan H
; APPLICANT: Beverley, Stephen
; APPLICANT: Sly, William S
; TITLE OF INVENTION: TARGETED THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-009
; CURRENT APPLICATION NUMBER: US/10/272,531A
; CURRENT FILING DATE: 2002-10-16
; PRIOR APPLICATION NUMBER: US 60/384,452
; PRIOR FILING DATE: 2002-05-29
; PRIOR APPLICATION NUMBER: US 60/386,019
; PRIOR FILING DATE: 2002-06-05
; PRIOR APPLICATION NUMBER: US 60/408,816
; PRIOR FILING DATE: 2002-09-06
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-272-531A-7

Query Match 52.9%; Score 45; DB 15; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 45
Db 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 70

RESULT 20
US-10-272-483A-7
; Sequence 7, Application US/10272483A

Publication No. US20040006008A1
; GENERAL INFORMATION:
; APPLICANT: Lebowitz, Jonathan H
; APPLICANT: Beverley, Stephen
; TITLE OF INVENTION: TARGETED THERAPEUTIC PROTEINS
; FILE REFERENCE: SYM-007CP
; CURRENT APPLICATION NUMBER: US/10/272,483A
; CURRENT FILING DATE: 2002-10-16
; PRIOR APPLICATION NUMBER: US 60/287,531
; PRIOR FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: US 10/136,841
; PRIOR FILING DATE: 2002-04-30
; PRIOR APPLICATION NUMBER: US 60/384,452
; PRIOR FILING DATE: 2002-05-29
; PRIOR APPLICATION NUMBER: US 60/386,019
; PRIOR FILING DATE: 2002-06-05
; PRIOR APPLICATION NUMBER: US 60/408,816
; PRIOR FILING DATE: 2002-09-06
; PRIOR APPLICATION NUMBER: US 60/304,609
; PRIOR FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: US 60/329,461
; PRIOR FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: US 60/351,276
; PRIOR FILING DATE: 2002-01-23
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 7
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-272-483A-7

Query Match 52.9%; Score 45; DB 15; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 45
Db 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 70

RESULT 21
US-10-444-262-1
; Sequence 1, Application US/10444262
; Publication No. US20040023883A1
; GENERAL INFORMATION:
; APPLICANT: Dubaquié, Yves
; APPLICANT: Lomman, Henry
; TITLE OF INVENTION: PROTEIN VARIANTS
; FILE REFERENCE: P1712R1
; CURRENT APPLICATION NUMBER: US/10/444,262
; CURRENT FILING DATE: 2003-05-22
; PRIOR APPLICATION NUMBER: US/09/724,478
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US/09/477,923
; PRIOR FILING DATE: 2000-01-05
; NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-444-262-1

Query Match 52.9%; Score 45; DB 16; Length 70;
Best Local Similarity 100.0%; Pred. No. 8.1e-37;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 45
Db 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 70

RESULT 22

US-10-323-046-42
; Sequence 42, Application US/10323046
; Publication No. US2003018732A1
; GENERAL INFORMATION:
; APPLICANT: Hubbell, Jeffrey A
; APPLICANT: Schense, Jason C
; APPLICANT: Sakiyama-Elbert, Shelly E
; TITLE OF INVENTION: Growth Factor Modified Protein Matrices for Tissue
; FILE REFERENCE: ETH 107 CIP (2)
; CURRENT APPLICATION NUMBER: US/10/323,046
; PRIOR FILING DATE: 2002-12-17
; PRIOR APPLICATION NUMBER: 09/141,153
; NUMBER OF SEQ ID NOS: 43
; SOFTWARE: Patent In Ver. 3.1
; SEQ ID NO: 42
; LENGTH: 91
; TYPE: PRT
; ORGANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: Modified IGF 1 from Homo sapiens
US-10-323-046-42

Query Match 52.9%; Score 45; DB 14; Length 91;
Best Local Similarity 100.0%; Pred. No. 1e-36;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAXSA 45
DB 47 NKPTGYSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAXSA 91

RESULT 23
US-10-179-046-14
; Sequence 14, Application US/10179046
; Publication No. US20030013154A1
; GENERAL INFORMATION:
; APPLICANT: Crawford, Kenneth
; APPLICANT: Zaror, Isabel
; APPLICANT: Inis, Michael
; TITLE OF INVENTION: Pichia Secretory Leader for Protein
; NUMBER OF SEQUENCES: 40
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Chiron Corporation
; STREET: 4560 Horton Street
; CITY: Emeryville
; STATE: California
; COUNTRY: United States
; ZIP: 94608
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/179,046
; FILING DATE: 25-Jun-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/029,267
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Chung, Ling-Fong
; REGISTRATION NUMBER: 36,482
; REFERENCE/DOCKET NUMBER: 1165.100
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (510) 601-2704
; TELEFAX: (510) 655-3542
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 118 amino acids

TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-10-179-046-14

Query Match 52.9%; Score 45; DB 14; Length 118;
Best Local Similarity 100.0%; Pred. No. 1.2e-36;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAXSA 45
DB 74 NKPTGYSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAXSA 118

RESULT 24
US-09-921-398-39
; Sequence 39, Application US/09921398
; Patent No. US20020055169A1
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave. Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/921,398
; FILING DATE: 02-Aug-2001
; CLASSIFICATION: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 39:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 155 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 39:
US-09-921-398-39

Query Match 52.9%; Score 45; DB 9; Length 155;
Best Local Similarity 100.0%; Pred. No. 1.6e-36;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAXSA 45
DB 111 NKPTGYSSRRAPQTGIVDECCFRSCDLRRLEMYCAPLKPAXSA 155

RESULT 25
US-10-280-826-39
; Sequence 39, Application US/10280826
; Publication No. US20030077831A1
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS

PROTEINS IN YEAST

NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA: US/10/280,826
APPLICATION NUMBER: US/10/280,826
FILING DATE: 25-Oct-2002
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/989,251
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 881 3175
TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
LENGTH: 155 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 39:
US-10-280-826-39

Query Match 52.9%; Score 45; DB 14; Length 155;
Best Local Similarity 100.0%; Pred. No. 1.6e-36;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPITYGSSRRAPQGTGYVDECCFRRSCDLRLRLMYCAPLKPAPKSA 45
DB 111 NKPITYGSSRRAPQGTGYVDECCFRRSCDLRLRLMYCAPLKPAPKSA 155

Search completed: March 3, 2004, 12:00:12
Job time : 34 secs

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OM protein - protein search, using sw model

Run on: March 3, 2004, 11:52:24 ; Search time 22 Seconds

(without alignments)
199.464 Million cell updates/sec

Title: US-09-852-261-2_COPY_26_110

Perfect score: 85
Sequence: 1 NKPTGYSSSRAPQTGLVD.....STNKTKSQRRKSTFPEHK 85

Scoring table:

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Gapop 60.0 , Gapext 60.0

Searched: 389414 seqs, 51625971 residues

Word size : 0

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Listing first 100 summaries

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3: /cgn2_6/ptodata/2/aa/6A_COMB.pep:*
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5: /cgn2_6/ptodata/2/aa/PCTUS_COMB.pep:*
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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	61	71.8	137	1	US-07-953-230A-10
2	61	71.8	152	3	US-08-950-720A-9
3	61	71.8	153	1	US-08-219-878A-1
4	61	71.8	153	3	PCT-US93-04329-1
5	61	71.8	156	3	US-09-142-583A-11
6	45	52.9	67	4	US-07-963-329A-2
7	45	52.9	67	5	PCT-US92-09443A-2
8	45	52.9	70	1	US-07-654-611-2
9	45	52.9	70	1	US-07-947-035-1
10	45	52.9	70	1	US-07-776-272-17
11	45	52.9	70	1	US-07-958-903A-17
12	45	52.9	70	1	US-08-462-018-17
13	45	52.9	70	1	US-08-823-245-17
14	45	52.9	70	1	US-08-483-271-1
15	45	52.9	70	3	US-09-080-120A-1
16	45	52.9	70	3	US-08-433-517-1
17	45	52.9	70	4	US-07-963-329A-1
18	45	52.9	70	4	US-09-477-924-1
19	45	52.9	70	4	US-09-723-981-1
20	45	52.9	70	4	US-09-723-896-1
21	45	52.9	70	5	PCT-US92-09443A-1
22	45	52.9	70	5	PCT-US93-11458-1
23	45	52.9	70	5	PCT-US95-08925-1
24	45	52.9	70	6	5470828-1
25	45	52.9	83	1	US-07-947-035-18
26	45	52.9	83	1	US-08-321-585A-12
27	45	52.9	94	1	US-07-989-845-28

28	45	52.9	94	1	US-07-989-844-12	Sequence 12, Appl
29	45	52.9	94	1	US-08-161-044-12	Sequence 12, Appl
30	45	52.9	94	1	US-08-240-121-12	Sequence 12, Appl
31	45	52.9	94	1	US-08-451-241-12	Sequence 12, Appl
32	45	52.9	94	5	PCT-US93-11297-12	Sequence 12, Appl
33	45	52.9	94	5	PCT-US93-11298-28	Sequence 28, Appl
34	45	52.9	118	3	US-09-029-267-14	Sequence 14, Appl
35	45	52.9	155	1	US-07-654-611-1	Sequence 1, Appl
36	45	52.9	155	1	US-08-328-397-8	Sequence 8, Appl
37	45	52.9	155	1	US-08-462-397-8	Sequence 8, Appl
38	45	52.9	155	3	US-08-989-251-39	Sequence 39, Appl
39	45	52.9	155	3	US-09-340-250-39	Sequence 39, Appl
40	45	52.9	155	4	US-09-528-108-39	Sequence 39, Appl
41	45	52.9	191	3	US-08-989-251-41	Sequence 41, Appl
42	45	52.9	191	3	US-09-340-250-41	Sequence 41, Appl
43	45	52.9	191	4	US-09-528-108-41	Sequence 41, Appl
44	45	52.9	191	4	US-09-528-108-41	Sequence 41, Appl
45	45	52.9	121	3	US-09-142-583A-4	Sequence 14, Appl
46	45	52.9	78	2	US-08-460-890A-47	Sequence 47, Appl
47	45	52.9	78	3	US-08-167-641C-47	Sequence 47, Appl
48	45	52.9	78	3	US-08-460-971A-47	Sequence 47, Appl
49	45	52.9	78	3	US-08-462-040-47	Sequence 47, Appl
50	45	52.9	78	3	US-08-823-852-18	Sequence 18, Appl
51	45	52.9	95	3	US-09-052-888-18	Sequence 18, Appl
52	45	52.9	95	4	US-09-723-890-18	Sequence 18, Appl
53	45	52.9	95	4	US-09-723-901-18	Sequence 18, Appl
54	45	52.9	95	4	US-09-723-547-18	Sequence 18, Appl
55	45	52.9	95	4	US-09-724-127-18	Sequence 18, Appl
56	45	52.9	95	4	US-09-723-931-18	Sequence 18, Appl
57	45	52.9	95	4	US-09-723-873-18	Sequence 18, Appl
58	45	52.9	95	4	US-09-724-114-18	Sequence 18, Appl
59	45	52.9	95	4	US-09-723-913-18	Sequence 18, Appl
60	45	52.9	38	6	5470721-4	Sequence 18, Appl
61	45	52.9	38	6	5470721-4	Sequence 18, Appl
62	45	52.9	38	6	5470721-4	Sequence 18, Appl
63	45	52.9	70	1	US-08-180-572-5	Sequence 5, Appl
64	45	52.9	68	4	US-09-201-227A-44	Sequence 44, Appl
65	45	52.9	119	6	5405942-1	Sequence 44, Appl
66	45	52.9	68	4	US-09-201-227A-22	Sequence 22, Appl
67	45	52.9	68	4	US-09-084-308B-218	Sequence 218, Appl
68	45	52.9	21	1	US-08-435-252-3	Sequence 3, Appl
69	45	52.9	50	6	5436136-16	Sequence 16, Appl
70	45	52.9	16	1	US-08-051-191-1	Sequence 1, Appl
71	45	52.9	16	1	US-08-366-796-1	Sequence 1, Appl
72	45	52.9	16	1	US-08-366-049-1	Sequence 1, Appl
73	45	52.9	16	1	US-08-658-198-1	Sequence 1, Appl
74	45	52.9	16	1	US-07-958-903A-4	Sequence 4, Appl
75	45	52.9	16	1	US-08-462-018-4	Sequence 4, Appl
76	45	52.9	16	1	US-08-823-245-4	Sequence 4, Appl
77	45	52.9	16	3	US-09-142-583A-8	Sequence 8, Appl
78	45	52.9	16	4	US-07-963-329A-67	Sequence 67, Appl
79	45	52.9	16	5	PCT-US92-09443A-62	Sequence 62, Appl
80	45	52.9	16	5	PCT-US93-05203-1	Sequence 1, Appl
81	45	52.9	16	1	US-07-958-903A-12	Sequence 12, Appl
82	45	52.9	16	1	US-08-462-018-12	Sequence 12, Appl
83	45	52.9	16	1	US-08-823-245-12	Sequence 12, Appl
84	45	52.9	16	4	US-07-963-329A-3	Sequence 3, Appl
85	45	52.9	16	4	US-07-963-329A-62	Sequence 62, Appl
86	45	52.9	16	5	PCT-US92-09443A-62	Sequence 62, Appl
87	45	52.9	16	1	US-07-958-903A-15	Sequence 15, Appl
88	45	52.9	16	20	US-08-462-018-15	Sequence 15, Appl
89	45	52.9	16	20	US-08-823-245-15	Sequence 15, Appl
90	45	52.9	16	20	US-07-963-329A-65	Sequence 65, Appl
91	45	52.9	16	20	PCT-US92-09443A-65	Sequence 65, Appl
92	45	52.9	16	15	US-07-958-903A-20	Sequence 20, Appl
93	45	52.9	15	1	US-08-462-018-20	Sequence 20, Appl
94	45	52.9	15	1	US-08-823-245-20	Sequence 20, Appl
95	45	52.9	15	4	US-07-963-329A-20	Sequence 20, Appl
96	45	52.9	15	5	PCT-US92-09443A-20	Sequence 20, Appl
97	45	52.9	18	4	US-07-963-329A-7	Sequence 7, Appl
98	45	52.9	18	4	PCT-US92-09443A-7	Sequence 7, Appl
99	45	52.9	14	5	US-07-963-329A-11	Sequence 11, Appl
100	45	52.9	14	5	PCT-US92-09443A-11	Sequence 11, Appl

ALIGNMENTS

RESULT 1
US-07-953-230A-10

Sequence 10, Application US/07953230A

Patent No. 5476779

GENERAL INFORMATION:

APPLICANT: CHEN, Thomas T

APPLICANT: SHAMLOTT, Michael J

TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED

TITLE OF INVENTION: FROM RAINBOW TROUT

NUMBER OF SEQUENCES: 12

CORRESPONDENCE ADDRESS:

ADDRESSEE: Burns, Doane, Swecker & Mathis

STREET: George Mason Bldg., Washington & Prince Sts.

CITY: Alexandria

STATE: Virginia

COUNTRY: United States

ZIP: 22313-1404

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/953,230A

FILING DATE: 30-SEP-1992

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Crane-Feurly, Sharon E

REGISTRATION NUMBER: 36,113

REFERENCE/DOCKET NUMBER: 028755-010

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703) 836-6620

TELEFAX: (703) 836-2021

INFORMATION FOR SEQ ID NO: 10:

SEQUENCE CHARACTERISTICS:

LENGTH: 137 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

FEATURE:

NAME/KEY: Peptide

LOCATION: 7

OTHER INFORMATION: /note= "Cap of 2 after 7."

FEATURE:

NAME/KEY: Peptide

LOCATION: 31

OTHER INFORMATION: /note= "Cap of 1 after 31."

FEATURE:

NAME/KEY: Peptide

LOCATION: 116

OTHER INFORMATION: /note= "Cap of 27 after 116."

US-07-953-230A-10

Query Match

Best Local Similarity 71.8%; Score 61; DB 1; Length 137;

Matches 61; Conservativity 100.0%; Pred. No. 6.5e-58;

Mismatches 0; Indels 0; Gaps 0;

Db

1 NKPTGSSRRAPQTGIVDECCFRSCDRLRLMTCAPIKPAKSASVRAQRTDMPKTQ 60

58 NKPTGSSRRAPQTGIVDECCFRSCDRLRLMTCAPIKPAKSASVRAQRTDMPKTQ 117

QY

61 K 61

Db

118 K 118

RESULT 2

US-08-950-720A-9

Sequence 9, Application US/08950720A

Patent No. 6046028

GENERAL INFORMATION:

APPLICANT: Conklin, Darrell C.

APPLICANT: Lofton-Day, Catherine E.

APPLICANT: Lok, Si

APPLICANT: Jaspers, Stephen R.

TITLE OF INVENTION: INSULIN HOMOLOG

NUMBER OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:

ADDRESSEE: Zymogenetics, Inc.

STREET: 1201 Eastlake Avenue East

CITY: Seattle

STATE: WA

COUNTRY: USA

ZIP: 98102

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSeq for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/950,720A

FILING DATE:

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: Sawtsiak, Deborah A

REGISTRATION NUMBER: 37,438

REFERENCE/DOCKET NUMBER: 96-09

TELECOMMUNICATION INFORMATION:

TELEPHONE: 206-442-6672

TELEFAX: 206-442-6678

INFORMATION FOR SEQ ID NO: 9:

SEQUENCE CHARACTERISTICS:

LENGTH: 152 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: No. 6046028e

US-08-950-720A-9

Query Match

Best Local Similarity 71.8%; Score 61; DB 3; Length 152;

Matches 61; Conservativity 100.0%; Pred. No. 7.1e-58;

Mismatches 0; Indels 0; Gaps 0;

Db

1 NKPTGSSRRAPQTGIVDECCFRSCDRLRLMTCAPIKPAKSASVRAQRTDMPKTQ 60

48 NKPTGSSRRAPQTGIVDECCFRSCDRLRLMTCAPIKPAKSASVRAQRTDMPKTQ 107

QY

61 K 61

Db

108 K 108

RESULT 3

US-08-219-878A-1

Sequence 1, Application US/08219878A

Patent No. 5473054

GENERAL INFORMATION:

APPLICANT: Bradford A. Jamson and Renato Baserga

TITLE OF INVENTION: IGF-1 Analogs

NUMBER OF SEQUENCES: 5

CORRESPONDENCE ADDRESS:

ADDRESSEE: Woodcock Washburn

STREET: Kurtz Mackiewicz & No. 5473054r1s

CITY: One Liberty Place - 46th Floor

STATE: Philadelphia

PA

RESULT 2

COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 MB STORAGE
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/219,878A
FILING DATE: 30-MAR-1994
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/881,524
FILING DATE: 08-MAY-1992
ATTORNEY/AGENT INFORMATION:
NAME: Mark Deluca
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-1240
TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 153
TYPE: amino acid
TOPOLOGY: linear
US-09-219-878A-1

Query Match 71.8%; Score 61; DB 1; Length 153;
Best Local Similarity 100.0%; Pred. No. 7.2e-58;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPDTGIVDECCFRSCDRLRLMYCAPLKPAKSARSVRAQRHTDMPKIQ 60
DB 74 NKPTGYSSRRAPDTGIVDECCFRSCDRLRLMYCAPLKPAKSARSVRAQRHTDMPKIQ 133

QY 61 K 61
DB 134 K 134

RESULT 4
PCT-US93-04329-1
Sequence 1, Application PC/TUS9304329
GENERAL INFORMATION:
APPLICANT: Bradford A. Jameson and Renato Baseerga
TITLE OF INVENTION: IGF-1 Analogs
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Woodcock Washburn
ADDRESSEE: Kurtz Mackiewicz & Norris
STREET: One Liberty Place - 46th Floor
CITY: Philadelphia
STATE: PA
COUNTRY: USA
ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 MB STORAGE
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT 5.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/04329
FILING DATE: 19930507
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/881,524
FILING DATE: 08-MAY-92,
ATTORNEY/AGENT INFORMATION:
NAME: Mark Deluca
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: TJU-0649
TELECOMMUNICATION INFORMATION:

TELEPHONE: (215) 568-3100
TELEFAX: (215) 568-3439
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 153
TYPE: AMINO ACID
TOPOLOGY: linear
PCT-US93-04329-1

Query Match 71.8%; Score 61; DB 5; Length 153;
Best Local Similarity 100.0%; Pred. No. 7.2e-58;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPDTGIVDECCFRSCDRLRLMYCAPLKPAKSARSVRAQRHTDMPKIQ 60
DB 74 NKPTGYSSRRAPDTGIVDECCFRSCDRLRLMYCAPLKPAKSARSVRAQRHTDMPKIQ 133

QY 61 K 61
DB 134 K 134

RESULT 5
US-09-142-583A-11
Sequence 11, Application US/09142583A
Patent No. 6221842
GENERAL INFORMATION:
APPLICANT: GOLDSPIRK, GEOFFREY
TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VANDERHAYE P. C.
STREET: 1100 NORTH GLEBE ROAD
CITY: ARLINGTON
STATE: VA
COUNTRY: USA
ZIP: 22201
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,583A
FILING DATE: 29-OCT-1998
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB97/00658
FILING DATE: 11-MAR-1997
APPLICATION NUMBER: GB 9605124.8
FILING DATE: 11-MAR-1996
ATTORNEY/AGENT INFORMATION:
NAME: SADOFF, B. J.
REGISTRATION NUMBER: 36663
REFERENCE/DOCKET NUMBER: 117-263
TELECOMMUNICATION INFORMATION:
TELEPHONE: 7038164000
TELEFAX: 7038164100
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 156 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-142-583A-11

Query Match 71.8%; Score 61; DB 3; Length 156;
Best Local Similarity 100.0%; Pred. No. 7.3e-58;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPDTGIVDECCFRSCDRLRLMYCAPLKPAKSARSVRAQRHTDMPKIQ 60

Db 77 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKASVAGRTDMPKTQ 136

QY 61 K 61

Db 137 K 137

RESULT 6

US-07-963-329A-2

Sequence 2, Application US/07963329A

Patent No. 6310040

GENERAL INFORMATION:

APPLICANT: Bozyczko-Coyne, Donna

APPLICANT: Neff, Nicola

APPLICANT: Lewis, Michael E.

APPLICANT: Iqbal, Mohamed

TITLE OF INVENTION: TREATING RETINAL NEURONAL DISORDERS

TITLE OF INVENTION: BY THE APPLICATION OF INSULIN-LIKE

NUMBER OF SEQUENCES: 79

CORRESPONDENCE ADDRESS:

ADDRESSEE: Fish & Richardson

STREET: 225 Franklin Street

CITY: Boston

STATE: Massachusetts

COUNTRY: U.S.A.

ZIP: 02110-2804

COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5" Diskette, 1.44 Mb

OPERATING SYSTEM: MS-DOS (Version 5.0)

SOFTWARE: WordPerfect (Version 5.1)

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/963,329A

CLASSIFICATION: 514

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/790,690

FILING DATE: NO. 6310040ember 8, 1991

ATTORNEY/AGENT INFORMATION:

NAME: Clark, Paul T.

REGISTRATION NUMBER: 30,162

REFERENCE/DOCKET NUMBER: 02655/012002

TELEPHONE: (617) 542-8906

TELEFAX: (617) 542-5070

TELEX: 200154

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 67

TYPE: amino acid

STRANDEDNESS:

TOPOLOGY: linear

US-07-963-329A-2

Query Match 52.9%; Score 45; DB 4; Length 67;

Best local Similarity 100.0%; Pred. No. 5e-41;

Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 45

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

TITLE OF INVENTION: DISORDERS BY THE APPLICATION OF

TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS AND

NUMBER OF SEQUENCES: 79

CORRESPONDENCE ADDRESS:

ADDRESSEE: Fish & Richardson

STREET: 225 Franklin Street

CITY: Boston

STATE: Massachusetts

COUNTRY: U.S.A.

ZIP: 02110-2804

COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5" Diskette, 1.44 Mb

OPERATING SYSTEM: MS-DOS (Version 5.0)

SOFTWARE: WordPerfect (Version 5.1)

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/09443A

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/790,690

FILING DATE: November 8, 1991

APPLICATION NUMBER: 07/963,329

FILING DATE: October 15, 1992

ATTORNEY/AGENT INFORMATION:

NAME: Clark, Paul T.

REGISTRATION NUMBER: 30,162

REFERENCE/DOCKET NUMBER: 02655/012002

TELEPHONE: (617) 542-8906

TELEFAX: (617) 542-5070

TELEX: 200154

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 67

TYPE: AMINO ACID

STRANDEDNESS: N/A

TOPOLOGY: N/A

PCT-US92-09443A-2

Query Match 52.9%; Score 45; DB 5; Length 67;

Best local Similarity 100.0%; Pred. No. 5e-41;

Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 45

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 45

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 45

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 45

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 45

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 45

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

QY 1 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 45

Db 23 NKPTGYGSSRRAPQGTGIVDECCFRSCDLRLRLMYCAPLKPAKSA 67

APPLICATION NUMBER: US/07/654,611
FILING DATE: 19910422
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 8619826.2
FILING DATE: 20-AUG-1988
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/EP89/00972
FILING DATE: 17-AUG-1989
ATTORNEY/AGENT INFORMATION:
NAME: Americk, Burton A.
REGISTRATION NUMBER: 24,852
REFERENCE/DOCKET NUMBER: 151/031
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)331-7111
TELEFAX: (202)223-2596
TELEX: 248587 RING
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 70 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Protein
LOCATION: 1..70
OTHER INFORMATION: /label= IGF-1
FEATURE:
NAME/KEY: Binding-site
LOCATION: 4
OTHER INFORMATION: /note= "potential glycosylation
FEATURE:
NAME/KEY: Binding-site
LOCATION: 29
OTHER INFORMATION: /note= "potential glycosylation
FEATURE:
NAME/KEY: Binding-site
LOCATION: one-of(33, 34, 35)
OTHER INFORMATION: /note= "potential glycosylation
FEATURE:
NAME/KEY: Binding-site
LOCATION: 41
OTHER INFORMATION: /note= "potential glycosylation
FEATURE:
NAME/KEY: Binding-site
LOCATION: 51
OTHER INFORMATION: /note= "potential glycosylation
FEATURE:
NAME/KEY: Binding-site
LOCATION: 69
OTHER INFORMATION: /note= "potential glycosylation
FEATURE:
NAME/KEY: Binding-site
LOCATION: (24, 25)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (21, 22)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (29, 30)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (31, 32)
OTHER INFORMATION: /note= "trypsin cleavage site"

FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (36, 37)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (37, 38)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (41, 42)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (50, 51)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (55, 56)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (56, 57)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cleavage-site
LOCATION: (60, 61)
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cross-links
LOCATION: 6..48
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cross-links
LOCATION: 18..61
OTHER INFORMATION: /note= "trypsin cleavage site"
FEATURE:
NAME/KEY: Cross-links
LOCATION: 47..52
OTHER INFORMATION: /note= "trypsin cleavage site"
US-07-654-611-2
Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
CY 1 NKPTGYGSSRRAPQGTIVDECCFRSCDRLRLMTCAPIKPKAKSA 45
DB 26 NKPTGYGSSRRAPQGTIVDECCFRSCDRLRLMTCAPIKPKAKSA 70
RESULT 9
US-07-947-035-1
Sequence 1, Application US/07947035
Patent No. 544045
GENERAL INFORMATION:
APPLICANT: Francis, Geoffrey L.
APPLICANT: Walton, Paul E.
APPLICANT: Ballard, Francis J.
APPLICANT: McMurtry, John P.
APPLICANT: Phelps, Patricia V.
TITLE OF INVENTION: Method of Administering IGF-1, IGF-2,
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
ADDRESSEE: Kenneth D. Sibley
STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: No. 544045ch Carolina
COUNTRY: US
ZIP: 28234
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/947,035
FILING DATE: 17-SEP-1992
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5175-59
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 881-3140
TELEFAX: (919) 881-3175
TELEX: 575102
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
US-07-947-035-1

Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPITYGSSRRAPQGTGYDECCFRSCDRLRLMTCAPLKPAXA 45
DB 26 NKPITYGSSRRAPQGTGYDECCFRSCDRLRLMTCAPLKPAXA 70

RESULT 10
US-07-776-272-17
Sequence 17, Application US/07776272
Patent No. 5612454
GENERAL INFORMATION:
APPLICANT: Kaminuma, Toshiniko
APPLICANT: Iida, Toshit
APPLICANT: Tajima, Masahito
TITLE OF INVENTION: Process for Purification of Polypeptide
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: Wegner, Cantor, Mueller & Player
STREET: 1233 20th St. N.W. P.O. Box 18218
CITY: Washington
STATE: District of Columbia
COUNTRY: United States of America
ZIP: 20036-8218
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/776,272
FILING DATE: 19911129
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Player, William E
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: P-450-23167
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-887-0400
TELEFAX: 202-887-0605
TELEX: 440706
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 70 amino acids
TYPE: AMINO ACID

TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: YES
US-07-776-272-17

Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPITYGSSRRAPQGTGYDECCFRSCDRLRLMTCAPLKPAXA 45
DB 26 NKPITYGSSRRAPQGTGYDECCFRSCDRLRLMTCAPLKPAXA 70

RESULT 11
US-07-958-903A-17
Sequence 17, Application US/07958903A
Patent No. 5652214

GENERAL INFORMATION:
APPLICANT: Lewis, Michael E.
APPLICANT: Kauer, James C.
APPLICANT: Smith, Kevin R.
APPLICANT: Callison, Kathleen V.
APPLICANT: Nelt, Nicola
APPLICANT: Baldino, Frank
TITLE OF INVENTION: TREATING DISORDERS BY APPLICATION
TITLE OF INVENTION: OF INSULIN-LIKE GROWTH FACTORS AND
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
CITY: Boston
STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02110-2804

COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 MB
COMPUTER: IBM PS/2 Model 502 or 555X
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: Wordperfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/958,903A
FILING DATE: October 7, 1992
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/361,595
FILING DATE: June 5, 1989
APPLICATION NUMBER: 07/534,139
FILING DATE: June 5, 1990
APPLICATION NUMBER: 07/869,913
FILING DATE: April 15, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 02655/003004
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 70
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
US-07-958-903A-17

Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 45
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 70

RESULT 12

US-08-462-018-17
Sequence 17, Application US/08462018
Patent No. 5703045
GENERAL INFORMATION:
APPLICANT: Lewis, Michael E.
APPLICANT: Kauer, James C.
APPLICANT: Smith, Kevin R.
APPLICANT: Callison, Kathleen V.
APPLICANT: Baldino, Frank
APPLICANT: Neft, Nicola
APPLICANT: Iqbal, Mohamed
TITLE OF INVENTION: TREATING DISORDERS BY APPLICATION
TITLE OF INVENTION: OF INSULIN-LIKE GROWTH FACTORS AND
TITLE OF INVENTION: ANALOGS
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
STREET: 225 Franklin Street
CITY: Boston
STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 502 or 55SX
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,018
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/958,903
FILING DATE: October 7, 1992
APPLICATION NUMBER: 07/361,595
FILING DATE: June 5, 1989
APPLICATION NUMBER: 07/534,139
FILING DATE: June 5, 1990
APPLICATION NUMBER: 07/869,913
FILING DATE: April 15, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 02655/003005
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 70
TYPE: amino acid
STRANDEDNESS: N/A
TOPOLOGY: linear
US-08-462-018-17
Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 13

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 45
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 70

US-08-823-245-17

Sequence 17, Application US/08823245
Patent No. 5776897
GENERAL INFORMATION:
APPLICANT: Lewis, Michael
APPLICANT: Kauer, James C.
APPLICANT: Smith, Kevin R.
APPLICANT: Callison, Kathleen V.
APPLICANT: Baldino, Frank
APPLICANT: Neft, Nicola
APPLICANT: Iqbal, Mohamed
TITLE OF INVENTION: TREATING DISORDERS BY
TITLE OF INVENTION: APPLICATION
TITLE OF INVENTION: OF INSULIN-LIKE GROWTH
TITLE OF INVENTION: FACTORS AND
TITLE OF INVENTION: ANALOGS
NUMBER OF SEQUENCES: 56
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
CITY: Boston
STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 502 or
COMPUTER: 55SX
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/823,245
FILING DATE: March 24, 1997
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/361,595
FILING DATE: June 6, 1989
APPLICATION NUMBER: 07/534,139
FILING DATE: June 5, 1990
APPLICATION NUMBER: 07/869,913
FILING DATE: April 15, 1992
APPLICATION NUMBER: 07/958,903
FILING DATE: October 7, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Creeson, Gary L.
REGISTRATION NUMBER: 34,310
REFERENCE/DOCKET NUMBER: 02655/003008
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 70
TYPE: amino acid
STRANDEDNESS: N/A
TOPOLOGY: N/A
US-08-823-245-17

Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 14

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 45
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMYCAPLKPAXSA 70

US-08-482-271-1
Sequence 1, Application US/08482271
Patent No. 5789547
GENERAL INFORMATION:

APPLICANT: Sommer, Andreas
APPLICANT: Ogawa, Yasushi
TITLE OF INVENTION: METHOD OF PRODUCING IGF-1 AND IGFBP-3
TITLE OF INVENTION: WITH CORRECT FOLDING AND DISULFIDE BONDING
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSER: MORRISON & FOERSTER
STREET: 755 Page Mill Road
CITY: Palo Alto
STATE: CA
COUNTRY: USA
ZIP: 94304-1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/482,271
FILING DATE: 07-JUN-1995
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Park, Freddie K.
REGISTRATION NUMBER: 35,636
REFERENCE/DOCKET NUMBER: 22095-20284.00
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
TELEFAX: (415) 494-0792
TELEX: 70614MRSN FOERS SFO
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-482-271-1

Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 5,2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQGTGVDECCFRSCDLRLRMYCAPLKPAPKSA 45
DB 26 NKPTGYGSSRRAPQGTGVDECCFRSCDLRLRMYCAPLKPAPKSA 70

RESULT 15
US-09-080-120A-1
Sequence 1, Application US/09080120A
Patent No. 6017885
GENERAL INFORMATION:
APPLICANT: BAGI, CEDO M.
APPLICANT: BROMWAGE, ROBERT
APPLICANT: ROSEN, DAVID M.
APPLICANT: ADAMS, STEVEN W.
TITLE OF INVENTION: IGF/IGFBP COMPLEX FOR PROMOTING BONE
TITLE OF INVENTION: FORMATION AND FOR REGULATING BONE REMODELING
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSER: MORRISON & FOERSTER
STREET: 755 Page Mill Road
CITY: Palo Alto
STATE: California
COUNTRY: USA
ZIP: 94304-1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/080,120A

FILING DATE: 14-MAY-1998
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/806,918
FILING DATE: 26-FEB-1997
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/450,258
FILING DATE: 25-MAY-1995
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/278,456
FILING DATE: 20-JUL-1994
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Buftinger, Nicholas
REGISTRATION NUMBER: 39,124
REFERENCE/DOCKET NUMBER: 220952027203
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 813-5600
TELEFAX: (650) 494-0792
TELEX: 706144
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-09-080-120A-1

Query Match 52.9%; Score 45; DB 3; Length 70;
Best Local Similarity 100.0%; Pred. No. 5,2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQGTGVDECCFRSCDLRLRMYCAPLKPAPKSA 45
DB 26 NKPTGYGSSRRAPQGTGVDECCFRSCDLRLRMYCAPLKPAPKSA 70

RESULT 16
US-08-432-517-1
Sequence 1, Application US/08432517
Patent No. 6083912
GENERAL INFORMATION:
APPLICANT: KHOURI, ROGER K.
TITLE OF INVENTION: METHOD FOR SOFT TISSUE AUGMENTATION
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSER: ROGERS, HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
STATE: MISSOURI
COUNTRY: USA
ZIP: 63105-1817
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/432,517
FILING DATE: 01-MAY-1995
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 952584
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314) 727-5188
TELEFAX: (314) 727-6092
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70 amino acids

TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHEMETICAL: NO
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 6..48
OTHER INFORMATION: /note="Disulfide bond between two
OTHER INFORMATION: cysteines."
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 18..61
OTHER INFORMATION: /note="Disulfide bond between two
OTHER INFORMATION: cysteines."
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 47..52
OTHER INFORMATION: /note="Disulfide bond between two
OTHER INFORMATION: cysteines."
US-08-432-517-1

Query Match 52.9%; Score 45; DB 3; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 45
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 70

RESULT 17
US-07-963-329A-1
Sequence 1, Application US/07963329A
Patent No. 6310040
GENERAL INFORMATION:
APPLICANT: Bozyczko-Coyne, Donna
APPLICANT: Nefi, Nicola
APPLICANT: Lewis, Michael E.
APPLICANT: Iqbal, Mohamed
TITLE OF INVENTION: TREATING RETINAL NEURONAL DISORDERS
TITLE OF INVENTION: BY THE APPLICATION OF INSULIN-LIKE
TITLE OF INVENTION: GROWTH FACTORS AND ANALOGS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESSES:
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
CITY: Boston
STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
COMPUTER: IBM PS/2 Model 50Z or 55SX
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/963,329A
FILING DATE: 19921015
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/790,690
FILING DATE: NO. 6310040ember 8, 1991
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 02655/012002
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70

TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
US-07-963-329A-1

Query Match 52.9%; Score 45; DB 4; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 45
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 70

RESULT 18
US-09-477-924-1
Sequence 1, Application US/09477924
Patent No. 6403764
GENERAL INFORMATION:
APPLICANT: Dubaglie, Yves
APPLICANT: Lowman, Henry
TITLE OF INVENTION: PROTEIN VARIANTS
FILE REFERENCE: P1712R1-1
CURRENT APPLICATION NUMBER: US/09/477,924
CURRENT FILING DATE: 2000-01-05
NUMBER OF SEQ ID NOS: 6
SEQ ID NO 1
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-09-477-924-1

Query Match 52.9%; Score 45; DB 4; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 45
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 70

RESULT 19
US-09-723-981-1
Sequence 1, Application US/09723981
Patent No. 6506874
GENERAL INFORMATION:
APPLICANT: Dubaglie, Yves
APPLICANT: Lowman, Henry
TITLE OF INVENTION: PROTEIN VARIANTS
FILE REFERENCE: P1712R1
CURRENT APPLICATION NUMBER: US/09/723,981
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: 09/477,923
PRIOR FILING DATE: 2000-01-05
NUMBER OF SEQ ID NOS: 6
SEQ ID NO 1
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-09-723-981-1

Query Match 52.9%; Score 45; DB 4; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 45
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 70

RESULT 20
US-09-723-896-1
Sequence 1, Application US/09723896

Patent No. 6509443
GENERAL INFORMATION:
APPLICANT: Dubague, Yves
APPLICANT: Loman, Henry
TITLE OF INVENTION: PROTEIN VARIANTS
FILE REFERENCE: P1712R1
CURRENT APPLICATION NUMBER: US/09/723,896
CURRENT FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US/09/477,923
PRIOR FILING DATE: 2000-01-05
NUMBER OF SEQ ID NOS: 6
SEQ ID NO: 1
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-09-723-896-1

Query Match 52.9%; Score 45; DB 4; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPAKSA 45
DB 26 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPAKSA 70

RESULT 21
PCT-US92-09443A-1
Sequence 1, Application PC/TUS9209443A
GENERAL INFORMATION:
APPLICANT: Botyczko-Coyne, Donna
APPLICANT: Nelf, Nicola
APPLICANT: Lewis, Michael E.
APPLICANT: Iqbal, Mohamed
TITLE OF INVENTION: TREATING RETINAL NEURONAL
DISORDERS BY THE APPLICATION OF
TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS AND
TITLE OF INVENTION: ANALOGS
NUMBER OF SEQUENCES: 79
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson
STREET: 225 Franklin Street
CITY: Boston
STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 MB
COMPUTER: IBM PS/2 Model 502 or 555X
OPERATING SYSTEM: MS-DOS (Version 5.0)
SOFTWARE: WordPerfect (Version 5.1)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/09443A
FILING DATE: 19921103
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/790,690
FILING DATE: November 8, 1991
APPLICATION NUMBER: 07/963,329
FILING DATE: October 15, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 02655/012W02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70
TYPE: AMINO ACID
STRANDEDNESS: N/A

TOPOLOGY: N/A
PCT-US92-09443A-1

Query Match 52.9%; Score 45; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPAKSA 45
DB 26 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPAKSA 70

RESULT 22
PCT-US93-11458-1
Sequence 1, Application PC/TUS9311458
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: MODIFIED INSULIN-LIKE GROWTH FACTOR
NUMBER OF SEQUENCES: 20
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/11458
FILING DATE: 24-NOV-1993
CLASSIFICATION:
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
PCT-US93-11458-1

Query Match 52.9%; Score 45; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 5.2e-41;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPAKSA 45
DB 26 NKPTGYSSRRAPQGTIVDECCFRSCDLRLRLEMYCAPLKPAKSA 70

RESULT 23
PCT-US95-08925-1
Sequence 1, Application PC/TUS9508925
GENERAL INFORMATION:
APPLICANT: CELTRIX PHARMACEUTICALS, INC.
TITLE OF INVENTION: IGF/IGFBP COMPLEX FOR PROMOTING BONE
FORMATION AND FOR REGULATING BONE REMODELLING
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FORSTER
STREET: 755 Page Mill Road
CITY: Palo Alto
STATE: California
COUNTRY: USA
ZIP: 94304-1018
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/08925
FILING DATE: NEW
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: PARK, FREDDIE K.
REGISTRATION NUMBER: 35,636

REFERENCE/DOCKET NUMBER: 220952027240
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 813-5600
TELEFAX: (415) 494-0792
TELEX: 706141
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
PCT-US95-08925-1

Query Match
Best Local Similarity 100.0%; Pred. No. 5.2e-41; Length 70;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 45
Db 26 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 70

RESULT 24
5470828-1
Patent No. 5470828
APPLICANT: BALLARD, FRANCIS J.; WALLACE, JOHN C.;
WELLS, JULIAN R.E.
TITLE OF INVENTION: PEPTIDE ANALOGS OF INSULIN-LIKE GROWTH
FACTOR II
NUMBER OF SEQUENCES: 2
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/947,514
FILING DATE: 17-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 408,518
FILING DATE: 24-AUG-1989
SEQ ID NO: 1
LENGTH: 70
5470828-1

Query Match
Best Local Similarity 52.9%; Score 45; DB 6; Length 70;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 45
Db 26 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 70

RESULT 25
US-07-947-035-18
Sequence 18, Application US/07947035
GENERAL INFORMATION:
APPLICANT: Francis, Geoffrey L.
APPLICANT: Walton, Paul E.
APPLICANT: Ballard, Francis J.
APPLICANT: Mcmurry, John P.
APPLICANT: Phelps, Patricia V.
TITLE OF INVENTION: Method of Administering IGF-1, IGF-2,
NUMBER OF INVENTIONS: and Analogs Thereof to Birds
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
ADDRESSEE: Kenneth D. Sibley
STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: No. 544045th Carolina
COUNTRY: US
ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/947,035
FILING DATE: 17-SEP-1992
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5175-59
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 881-3140
TELEFAX: (919) 881-3175
TELEX: 575102
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 83 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: Protein
HYPOTHETICAL: NO
US-07-947-035-18

Query Match
Best Local Similarity 52.9%; Score 45; DB 1; Length 83;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 45
Db 39 NKPTGYSSRRAPQTGIVDECCFRSCDLRLLEMYCAPLKPAXSA 83

Search completed: March 3, 2004, 11:55:48
Job time: 23 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 3, 2004, 11:12:54 ; Search time 54 Seconds
(without alignments)
444.751 Million cell updates/sec

Title: US-09-852-261-2_COPY_26_110
Perfect score: 85
Sequence: 1 NKPFGYSSSRAPQTGIVD.....STNKNTKQRRKSGTPEHK 85

Scoring table:
Gapop 60.0 , Gapext 60.0

Searched: 1586107 seqs, 282547505 residues

Word size : 0

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 100 summaries

Database : A_Geneseq_29Jan04:*

1: Geneseqp19808:*\n2: Geneseqp19908:*\n3: Geneseqp20008:*\n4: Geneseqp20018:*\n5: Geneseqp20028:*\n6: Geneseqp20038:*\n7: Geneseqp20048:*\n8: Geneseqp20058:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	85	100.0	110	AAE02447	Human IGF
2	85	100.0	110	AAU10559	Human mec
3	85	100.0	110	ABR63167	Human mec
4	78	91.8	105	AAU02450	Human liv
5	61	71.8	105	AAU0562	Human liv
6	61	71.8	105	AAU0562	Human liv
7	61	71.8	105	AAU0562	Human liv
8	61	71.8	105	AAU0562	Human liv
9	61	71.8	105	AAU0562	Human liv
10	61	71.8	105	AAU0562	Human liv
11	61	71.8	105	AAU0562	Human liv
12	61	71.8	105	AAU0562	Human liv
13	61	71.8	105	AAU0562	Human liv
14	61	71.8	105	AAU0562	Human liv
15	61	71.8	105	AAU0562	Human liv
16	61	71.8	105	AAU0562	Human liv
17	61	71.8	105	AAU0562	Human liv
18	61	71.8	105	AAU0562	Human liv
19	61	71.8	105	AAU0562	Human liv
20	61	71.8	105	AAU0562	Human liv
21	61	71.8	105	AAU0562	Human liv
22	61	71.8	105	AAU0562	Human liv
23	61	71.8	105	AAU0562	Human liv
24	61	71.8	105	AAU0562	Human liv
25	61	71.8	105	AAU0562	Human liv

26	45	52.9	70	2	AAI10586	Modified
27	45	52.9	70	2	AAI10587	Modified
28	45	52.9	70	2	AAI10588	Modified
29	45	52.9	70	2	AAI10589	Modified
30	45	52.9	70	2	AAI10590	Modified
31	45	52.9	70	2	AAI10591	Modified
32	45	52.9	70	2	AAI10592	Modified
33	45	52.9	70	2	AAI10593	Modified
34	45	52.9	70	2	AAI10594	Modified
35	45	52.9	70	2	AAI10595	Modified
36	45	52.9	70	2	AAI10596	Modified
37	45	52.9	70	2	AAI10597	Modified
38	45	52.9	70	2	AAI10598	Modified
39	45	52.9	70	2	AAI10599	Modified
40	45	52.9	70	2	AAI10600	Modified
41	45	52.9	70	2	AAI10601	Modified
42	45	52.9	70	2	AAI10602	Modified
43	45	52.9	70	2	AAI10603	Modified
44	45	52.9	70	2	AAI10604	Modified
45	45	52.9	70	2	AAI10605	Modified
46	45	52.9	70	2	AAI10606	Modified
47	45	52.9	70	2	AAI10607	Modified
48	45	52.9	70	2	AAI10608	Modified
49	45	52.9	70	2	AAI10609	Modified
50	45	52.9	70	2	AAI10610	Modified
51	45	52.9	70	2	AAI10611	Modified
52	45	52.9	70	2	AAI10612	Modified
53	45	52.9	70	2	AAI10613	Modified
54	45	52.9	70	2	AAI10614	Modified
55	45	52.9	70	2	AAI10615	Modified
56	45	52.9	70	2	AAI10616	Modified
57	45	52.9	70	2	AAI10617	Modified
58	45	52.9	70	2	AAI10618	Modified
59	45	52.9	70	2	AAI10619	Modified
60	45	52.9	70	2	AAI10620	Modified
61	45	52.9	70	2	AAI10621	Modified
62	45	52.9	70	2	AAI10622	Modified
63	45	52.9	70	2	AAI10623	Modified
64	45	52.9	70	2	AAI10624	Modified
65	45	52.9	70	2	AAI10625	Modified
66	45	52.9	70	2	AAI10626	Modified
67	45	52.9	70	2	AAI10627	Modified
68	45	52.9	70	2	AAI10628	Modified
69	45	52.9	70	2	AAI10629	Modified
70	45	52.9	70	2	AAI10630	Modified
71	45	52.9	70	2	AAI10631	Modified
72	45	52.9	70	2	AAI10632	Modified
73	45	52.9	70	2	AAI10633	Modified
74	45	52.9	70	2	AAI10634	Modified
75	45	52.9	70	2	AAI10635	Modified
76	45	52.9	70	2	AAI10636	Modified
77	45	52.9	70	2	AAI10637	Modified
78	45	52.9	70	2	AAI10638	Modified
79	45	52.9	70	2	AAI10639	Modified
80	45	52.9	70	2	AAI10640	Modified
81	45	52.9	70	2	AAI10641	Modified
82	45	52.9	70	2	AAI10642	Modified
83	45	52.9	70	2	AAI10643	Modified
84	45	52.9	70	2	AAI10644	Modified
85	45	52.9	70	2	AAI10645	Modified
86	45	52.9	70	2	AAI10646	Modified
87	45	52.9	70	2	AAI10647	Modified
88	45	52.9	70	2	AAI10648	Modified
89	45	52.9	70	2	AAI10649	Modified
90	45	52.9	70	2	AAI10650	Modified
91	45	52.9	70	2	AAI10651	Modified
92	45	52.9	70	2	AAI10652	Modified
93	45	52.9	70	2	AAI10653	Modified
94	45	52.9	70	2	AAI10654	Modified
95	45	52.9	70	2	AAI10655	Modified
96	45	52.9	70	2	AAI10656	Modified
97	45	52.9	70	2	AAI10657	Modified
98	45	52.9	70	2	AAI10658	Modified
99	45	52.9	70	2	AAI10659	Modified
100	45	52.9	70	2	AAI10660	Modified

99 43 50.6 105 7 ABR63172 ABR63172 Rabb1t 1i
100 43 50.6 111 4 AAE02449 AAE02449 Rabb1t 1G

ALIGNMENTS

RESULT 1
ID AAE02447 standard; protein; 110 AA.

XX AC AAE02447;
XX DT 10-AUG-2001 (first entry)
XX DE Human IGF-I isoform mechano-growth factor (MGF) protein.
XX KW Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;
XX KW mechano-growth factor; neurological disorder; neurodegenerative disorder;
XX KW amyotrophic lateral sclerosis; spinal muscular atrophy; muscular atrophy;
XX KW poliomyelitis; post-polio syndrome; toxin; motoneuron disease;
XX KW nerve damage; autosomal muscular dystrophy; diabetic neuropathy;
XX KW sex-linked muscular dystrophy; peripheral neuropathy;
XX KW Alzheimer's disease; Parkinson's disease.
XX OS Homo sapiens.
XX PN WO200136483-A1.
XX PD 25-MAY-2001.
XX PF 15-NOV-2000; 2000WO-GB004354.
XX PR 15-NOV-1999; 99GB-00026968.
XX PA (UNLO) UNIV COLLEGE LONDON.
XX PI Goldspink G, Johnson I;
XX PT WPI, 2001-355620/37.
XX DR N-PSDB; AAD06398.
XX PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I,
XX PT capable of reducing motoneuron loss, in the manufacture of a medicament
XX PT for the treatment of neurological disorder.
XX PS Claim 4; Page 50-51; 66pp; English.

XX CC The present invention relates to use of mechano-growth factor (MGF), an
XX CC Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a
XX CC medicament for the treatment of neurological disorder. The MGF is capable
XX CC of reducing motoneuron loss by 20% or greater in response to nerve
XX CC avulsion, and effects motoneuron rescue, preferably adult motoneuron
XX CC rescue. The MGF polynucleotide and polypeptide are useful in the
XX CC manufacture of a medicament for the treatment of a neurological disorder,
XX CC including a disorder of motoneurons and/or neurodegenerative disorder,
XX CC e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive
XX CC spinal muscular atrophy, infantile or juvenile muscular atrophy,
XX CC poliomyelitis or post-polio syndrome, a disorder caused by exposure to a
XX CC toxin, motoneuron trauma, a motoneuron lesion or nerve damage, an
XX CC injury that affects motoneurons, motoneuron loss associated with aging,
XX CC autosomal or sex-linked muscular dystrophy, diabetic neuropathy,
XX CC peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The
XX CC present sequence is human IGF-I isoform MGF. MGF is a muscle isoform
XX CC having extracellular (EC) domain, hence also referred as IGF-I-EC. The
XX CC MGF protein comprises amino acid sequences encoded by nucleic acid
XX CC sequence of IGF-I exons 4, 5 and 6 in the reading frame of MGF

XX SQ Sequence 110 AA;

Query Match 100.0%; Score 85; DB 4; Length 110;
Best Local Similarity 100.0%; Pred. No. 1.3e-80;
Matches 85; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMTYCAPLKPAKSARSVAQRHTMPKQ 60
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMTYCAPLKPAKSARSVAQRHTMPKQ 85
QY 61 KYQPPSTNKTNSQRRKGSFTEEHK 85
DB 86 KYQPPSTNKTNSQRRKGSFTEEHK 110

RESULT 2

ID AAU10559 standard; protein; 110 AA.

XX AC AAU10559;
XX DT 25-FEB-2002 (first entry)
XX DE Human mechano-growth factor (MGF) polypeptide.
XX KW Human; mechano-growth factor; insulin-like growth factor I; IGF-I; MGF;
XX KW neuroprotective; nerve damage; peripheral nervous system; nerve severing;
XX KW muscle; neurological disorder; motoneuron loss; motoneuron disorder;
XX KW nerve avulsion.
XX OS Homo sapiens.
XX PN WO200185781-A2.
XX PD 15-NOV-2001.
XX PF 10-MAY-2001; 2001WO-GB002054.
XX PR 10-MAY-2000; 2000GB-00011278.
XX PA (UNLO) UNIV COLLEGE LONDON.
XX PA (EGRI-) EAST GRINSTEAD MEDICAL RES TRUST.
XX PI Goldspink G, Terenight G;
XX PT WPI, 2002-055585/07.
XX DR N-PSDB; AAS16877.
XX PT Use of insulin-like growth factor-I (IGF-I) isoform known as mechano
XX PT growth factor which is encoded by IGF-I exons 4,5,6 and has ability to
XX PT reduce motoneuron loss in response to nerve avulsion, to treat nerve
XX PT damage.
XX PS Claim 11; Fig 5; 65pp; English.

XX CC The invention relates to the use of an insulin-like growth factor I (IGF-
XX CC I) isoform, known as mechano-growth factor (MGF), in the manufacture of a
XX CC medicament for treating nerve damage by localising MGF at the site of damage. The
XX CC for treating nerve damage by localising MGF at the site of damage. The
XX CC nerve damage may include severing of a nerve. The treatment may be
XX CC combined with another treatment (such as a polypeptide growth factor
XX CC other than MGF) that prevents or diminishes degeneration of the target
XX CC organ (for example, muscle) which the damaged nerve innervates, whereby
XX CC the treatment of the muscle with MGF or a polynucleotide, encoding MGF
XX CC prevents or diminishes degeneration. The method is useful for treating
XX CC neurological disorders, preferably motoneuron disorders. These methods
XX CC can reduce motoneuron loss by 20% or greater in response to nerve
XX CC avulsion. This sequence represents the human MGF polypeptide

XX SQ Sequence 110 AA;

Query Match 100.0%; Score 85; DB 5; Length 110;
Best Local Similarity 100.0%; Pred. No. 1.3e-80;
Matches 85; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMTYCAPLKPAKSARSVAQRHTMPKQ 60
DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLMTYCAPLKPAKSARSVAQRHTMPKQ 85

QY 61 KYOPSTNKTNSQRRKSTFEHK 85
 DB 86 KYOPSTNKTNSQRRKSTFEHK 110

RESULT 3

ABR63167
 ID ABR63167 standard; protein, 110 AA.

AC ABR63167;

DT 18-DEC-2003 (first entry)

DE Human mechano growth factor (C-terminal end).

KM Mechano growth factor; MGF, insulin-like growth factor 1; human;
 KW splice variant; cardiac; vasotropic; gene therapy.

OS Homo sapiens.

PN WO2003066082-A1.

PD 14-AUG-2003.

PF 06-FEB-2003; 2003WO-GB000537.

PR 07-FEB-2002; 2002GB-00002906.

PA (UNLO) UNIV COLLEGE LONDON.

PA (UNII) UNIV ILLINOIS FOUND.

PI Goldspink G, Goldspink P;

DR WPI; 2003-636936/60.

DR N-PSDB; ACF79635.

PT Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
 PT or limiting apoptosis in the myocardium, particularly for preventing or
 PT limiting myocardial damage in response to ischemia or mechanical overload
 PT of the heart.

PS Claim 5; Fig 7; 74pp; English.

CC The present sequence is that of the C-terminal end of novel human mechano
 CC growth factor (MGF), encoded by exons 3-6 of the IGF-I gene. MGF is a
 CC splice variant and non-liver type isoform of insulin-like growth factor
 CC (IGF-I) that is activated in response to cardiac tissue damage and which
 CC has a repair function in the ischaemic and/or overloaded heart. The human
 CC MGF transcript has a 49 base insert in the B domain that alters the
 CC reading frame and hence the C-terminal end of MGF protein in comparison
 CC with other IGF-I splice variants. The invention provides use of a MGF
 CC polypeptide or polynucleotide in the manufacture of a medicament for the
 CC prevention or limitation of myocardial damage in response to ischemia or
 CC mechanical overload of the heart by preventing or limiting apoptosis in
 CC the myocardium. The MGF polypeptide, polynucleotide or medicament is also
 CC useful for administration in response to a heart attack

SQ Sequence 110 AA;

Query Match 100.0%; Score 85; DB 7; Length 110;
 Best Local Similarity 100.0%; Pred. No. 1.3e-60;
 Matches 85; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGSSRRAPQTGIVDECFFRSCLRLRLMYCAPLKPASRSVRAQRHTDMPKTQ 60
 DB 26 NKPTGSSRRAPQTGIVDECFFRSCLRLRLMYCAPLKPASRSVRAQRHTDMPKTQ 85

QY 61 KYOPSTNKTNSQRRKSTFEHK 85

DB 86 KYOPSTNKTNSQRRKSTFEHK 110

RESULT 4

AAP70277
 ID AAP70277 standard; protein, 195 AA.

AC AAP70277;

DT 25-MAR-2003 (revised)

DT 05-APR-1991 (first entry)

DE Sequence of pre-pro-insulin-like growth factor 1B (pIGF-1B).

KM Growth promoter; lactation enhancer; cell proliferation.

OS Homo sapiens.

PN EP29750-A.

PD 22-JUL-1987.

PF 06-JAN-1987; 87EP-00870001.

PR 07-JAN-1986; 86US-00816662.

PR 20-NOV-1986; 86US-00929671.

PA (UNIW) UNIV WASHINGTON.

PI Kriya GG, Rotwein PS;

DR WPI; 1987-200203/29.

PT New pre-pro-insulin-like growth factor-1 protein - obtd. by recombinant
 PT DNA procedures for use as growth promoters for enhancing lactation, for
 PT stimulating cell proliferation etc.

PS Claim 11; Fig 6; 59pp; English.

CC A 42 base oligonucleotide corresponding to the DNA sequence encoding
 CC amino acids 10 to 23 of mature human IGF-I was synthesized (AA070437).
 CC The radiolabeled 42 mer was then employed to screen for IGF-I containing
 CC DNA sequences in a human liver cDNA library. Insulin-like growth factors
 CC -1A and -1B cDNAs were isolated from a human cDNA library by using
 CC lambdaag 11 (AA070435, AA070436). The human IGF-I genomic gene was
 CC isolated and mapped. It encodes at least two preproinsulin-like growth
 CC factor-1 proteins. An essentially pure preproinsulin-like growth factor-1
 CC protein comprising the sequence of amino acids shown in Figure six is
 CC claimed (AAP70277). (Updated on 25-MAR-2003 to correct PA field.)

SQ Sequence 195 AA;

Query Match 91.8%; Score 78; DB 1; Length 195;
 Best Local Similarity 100.0%; Pred. No. 4.2e-73;
 Matches 78; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGSSRRAPQTGIVDECFFRSCLRLRLMYCAPLKPASRSVRAQRHTDMPKTQ 60
 DB 74 NKPTGSSRRAPQTGIVDECFFRSCLRLRLMYCAPLKPASRSVRAQRHTDMPKTQ 133

QY 61 KYOPSTNKTNSQRRK 78

DB 134 KYOPSTNKTNSQRRK 151

RESULT 5

AAE02450
 ID AAE02450 standard; protein, 105 AA.

AC AAE02450;

DT 10-AUG-2001 (first entry)

DE Human liver-type IGF-I isoform (L-IGF-I) protein.

KM Human; IGF-I isoform; Insulin-like Growth Factor-I; MGF;

OS Homo sapiens.
XX
XX WO200136483-A1.
PN
PD 25-MAY-2001.
XX
XX 15-NOV-2000; 2000WO-GB004354.
PF
XX 15-NOV-1999; 99GB-00026968.
PR
XX
XX (UNLO) UNIV COLLEGE LONDON.
PA
PI Goldspink G, Johnson I;
XX
XX WPL: 2001-355620/37.
DR N-PDSB; AAD06403.
PT
PT Use of mechano-growth factor, an isoform of Insulin-like Growth Factor-I capable of reducing motoneurone loss, in the manufacture of a medicament for the treatment of neurological disorder.
PS Disclosure; Fig 8; 66pp; English.

The present invention relates to use of mechano-growth factor (MGF), an Insulin-like Growth Factor-I (IGF-I) isoform in the manufacture of a medicament for the treatment of neurological disorder. The MGF is capable of reducing motoneurone loss by 20% or greater in response to nerve avulsion, and effects motoneurone rescue, preferably adult motoneurone rescue. The MGF polynucleotide and polypeptide are useful in the manufacture of a medicament for the treatment of a neurological disorder, including a disorder of motoneurons and/or neurodegenerative disorder, e.g., amyotrophic lateral sclerosis, spinal muscular atrophy, progressive spinal muscular atrophy, infantile or juvenile muscular atrophy, poliomyelitis or post-polio syndrome, a disorder caused by exposure to a toxin, motoneurone trauma, a motoneurone lesion or nerve damage, an injury that affects motoneurons, motoneurone loss associated with aging, autosomal or sex-linked muscular dystrophy, diabetic neuropathy, peripheral neuropathies, Alzheimer's disease and Parkinson's disease. The present sequence is human liver-type IGF-I isoform (L-IGF-I). The L-IGF-I protein exploits amino acid sequences encoded by nucleic acid sequence of IGF-I exons 4 and 6

Sequence 105 AA:
SQ

Query Match 71.8%; Score 61; DB 4; Length 105;
Best Local Similarity 100.0%; Pred. No. 1,4e+55;
Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0

OY 1 NKPTGYSSRRAPQPGIYDECCFCRSCDRLRLMTCAPIKPKARSVPRAQRHTMDPXTQ 60
Db 26 NKPTGYSSRRAPQGTIVDECFCRCSDRLRLMTCAPIKPKARSVPRAQRHTMDPXTQ 85
OY 61 K 61
↓
Db 86 K 86

RESULT 6
AAU10562
ID AAU10562 standard; protein; 105 AA.
AC
XX AAU10562;
XX
DT 25-FEB-2002 (first entry)
XX Human insulin-like growth factor I liver-type isoform (L-IGF-I).
DE

[illegible]

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XX XX Homo sapiens.
OS
XX
XX WO2003066082-A1.
XX
XX 14-AUG-2003.
XX
XX 06-FEB-2003; 2003WO-GB000537.
XX
XX 07-FEB-2002; 2002GB-00002906.
XX
XX (UNLO ) UNIV COLLEGE LONDON.
XX
XX (UNLI ) UNIV ILLINOIS FOUNO.
XX
XX Goldspink G, Goldspink P;
XX
XX WPI, 2003-636936/60.
XX
XX N-PsDB; ACF79638.
XX
XX Use of Mechano Growth Factor polypeptide or polynucleotide for preventing
XX or limiting apoptosis in the myocardium, particularly for preventing or
XX limiting myocardial damage in response to ischemia or mechanical overload
XX of the heart.
XX
XX Disclosure; Fig 10; 74pp; English.
XX
XX The present sequence is the protein sequence of human liver-specific
XX insulin-like growth factor 1 (IGF-1) C-terminal region. It is encoded by
XX exons 3, 4 and 6 of the IGF-1 gene. The invention relates to a novel IGF-
XX I splice variant, denoted mechano growth factor, a non-liver type isoform
XX of IGF-1 that is activated in response to cardiac tissue damage and which
XX has a repair function in the ischemic and/or overloaded heart. The human
XX MGF transcript has a 49 base insert in the E domain that alters the
XX reading frame and hence the C-terminal end of MGF protein in comparison
XX with other IGF-1 splice variants. The invention provides use of a MGF
XX polypeptide or polynucleotide in the manufacture of a medicament for the
XX prevention or limitation of myocardial damage in response to ischemia or
XX mechanical overload of the heart by preventing or limiting apoptosis in
XX the myocardium. The MGF polypeptide, polynucleotide or medicament is also
XX useful for administration in response to a heart attack
XX
XX Sequence 105 AA;
XX
XX Query Match 71.8%; Score 61; DB 7; Length 105;
XX Best Local Similarity 100.0%; Pred. No. 1.4e-55;
XX Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPAKARSVRARHTDMPKIQ 60
XX Db 26 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPAKARSVRARHTDMPKIQ 85
XX
XX QY 61 K 61
XX
XX Db 86 K 86
XX
XX RESULT 8
XX AAU09067
XX ID AAU09067 standard; protein; 137 AA.
XX
XX AAU09067;
XX
XX 19-DEC-2001 (first entry)
XX
XX Human insulin-like growth factor, IGF1.
XX
XX Human, long-term memory protein; LTM; insulin-like growth factor;
XX neuroleptic; anticonvulsant; neurotrophic; neuroprotective; IGF1;
XX cerebroprotective; drug discovery; therapeutic profiling;
XX learning disability; memory impairment; brain injury; epilepsy;
XX mental retardation; senile dementia; Alzheimer's disease.
XX
XX Homo sapiens.
XX

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XX XX WO200174298-A2.
XX
XX 11-OCT-2001.
XX
XX 02-APR-2001; 2001WO-US010661.
XX
XX 31-MAR-2000; 2000US-0193614P.
XX
XX (UYER-) UNIV BROWN RESEARCH FOUNO.
XX
XX (HUGH-) HUGHES HOWARD MED INST.
XX
XX Alberini CM, Bear MF;
XX
XX WPI, 2001-626335/72.
XX
XX N-PsDB; AAS14695.
XX
XX Regulating memory consolidation in an animal comprising treating with an
XX agent that modulates activity of one or more genes from zif268, insulin-
XX like growth factor, glutamate receptor 2, c/EBPbeta and VGF.
XX
XX Disclosure; Page 90-91; 100pp; English.
XX
XX The invention relates to modulating long term memory consolidation in an
XX animal comprising treating with an agent that modulates the activity of
XX one or more of genes from zif268, insulin-like growth factor (IGF),
XX glutamate receptor 1 (GluR1), glutamate receptor 2 (GluR2), c/EBPbeta and
XX neuroendocrine VGF (neurotrophin-inducible gene). The method is useful for
XX identifying an agent which modulates memory consolidation. The method is
XX useful for conducting a drug and/or target discovery business, which
XX comprises conducting therapeutic profiling of the agents (or their
XX analogues) identified, for efficacy and toxicity in animals, and
XX formulating a pharmaceutical preparation including one or more agents
XX identified as having an acceptable therapeutic profile and/or licensing
XX to a third party the rights for further drug development of the
XX identified agents. The method of conducting drug discovery business
XX further comprises an additional step of establishing a distribution
XX system for distributing the preparation for sale and may optionally
XX include establishing a sales group for marketing the preparation. A
XX pharmaceutical composition containing the agent is useful for enhancing
XX memory consolidation in an animal, or for augmenting learning and memory,
XX or otherwise for enhancing the functional performance of central nervous
XX system neurons, where the agent is a cAMP elevating agent (agonist),
XX preferably a cAMP analogue or cAMP phosphodiesterase inhibitor, which
XX activates adenylate cyclase. The composition is useful for treating
XX diseases associated with learning disabilities, memory impairment e.g.
XX due to toxicant exposure, brain injury, epilepsy, mental retardation in
XX children and senile dementia, including Alzheimer's disease. The present
XX sequence represents human insulin-like growth factor, IGF1
XX
XX Sequence 137 AA;
XX
XX Query Match 71.8%; Score 61; DB 4; Length 137;
XX Best Local Similarity 100.0%; Pred. No. 1.7e-55;
XX Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPAKARSVRARHTDMPKIQ 60
XX Db 58 NKPTGYSSSRAPQTGIVDECCFRSCDLRLLEMYCAPLPAKARSVRARHTDMPKIQ 117
XX
XX QY 61 K 61
XX
XX Db 118 K 118
XX
XX RESULT 9
XX AAR83803
XX ID AAR83803 standard; protein; 153 AA.
XX
XX AAR83803;
XX
XX 15-FEB-1996 (first entry)
XX
XX

```

```

DE Insulin-like growth factor 1.
XX
XX Insulin-like growth factor 1 receptor; IGF-1; synthetic peptide; cancer;
KW autophosphorylation; cellular growth; proliferation; restenosis; asthma;
KW burn; wound; brain metastasis.
XX
OS Homo sapiens.
XX
XX Key Location/Qualifiers
XX FH Peptide 49..118
XX FT /label= mature peptide
XX FT Domain 49..77
XX FT Domain /label= B domain
XX FT Domain 78..89
XX FT Domain /label= C domain
XX FT Domain 90..110
XX FT Domain /label= A domain
XX FT Domain 111..118
XX FT Domain /label= D domain
XX
XX MO9516703-A1.
XX
XX 22-JUN-1995.
XX
XX 15-DEC-1994; 94WO-US014576.
XX
XX 15-DEC-1993; 93US-00167653.
XX
XX (UYE-) UNIV JEFFERSON THOMAS.
XX
XX Jameson BA, Baserga R;
XX
XX WPI; 1995-231515/30.
XX
XX New synthetic IGF-1 analogues comprising 5-25 amino acids - useful in
XX treatment of diseases associated with undesirable cell proliferation.
XX
XX Disclosure; Page 20-21; 28pp; English.
XX
XX The amino acid sequence of the insulin-like growth factor 1 pre-protein.
XX Processing of the protein results in a 70 amino acid mature protein. The
XX mature protein is split into 4 domains: the B domain has strong homology
XX to the B chain of insulin, the A domain similarly has homology to the A
XX chain of insulin. These domains are separated by a C-terminus. The D
XX mature protein is terminated by a D domain at the C-terminus. The D
XX amino acid residues 60-64 of the mature IGF-1 protein. IGF-1 binds to the
XX IGF-1 receptor (IGF-1R) via the D domain and induces activation of the
XX IGF-1R by autophosphorylation of the IGF-1R. Activated IGF-1R is
XX associated with cellular growth and proliferation. The synthetic peptides
XX are useful as inhibitors of IGF-1 binding to IGF-1R and thus may be used
XX in the treatment of disorders characterised by undesirable cell
XX proliferation eg. cancer, restenosis, asthma, burns, wounds or brain
XX metastases
XX
XX Sequence 153 AA;
XX
XX Query Match 71.8%; Score 61; DB 2; Length 153;
XX Best Local Similarity 100.0%; Pred. No. 1.9e-55;
XX Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 NKPTGYGSSRRAPOTGIIVDECCFRSCDRLRLMTWCAPLKPAKSARSYRAQRHTDMPKQTQ 60
XX 74 NKPTGYGSSRRAPOTGIIVDECCFRSCDRLRLMTWCAPLKPAKSARSYRAQRHTDMPKQTQ 133
XX
XX 61 K 61
XX
XX 134 K 134
XX
XX RESULT 10
XX AAM69733
XX ID AAM69733 standard; protein; 153 AA.

```

```

XX
XX AAM69733;
XX
XX 26-OCT-1998 (first entry)
XX
XX Human IGF-1.
XX
XX Human; IGF-1; insulin-like growth factor 1; urinary incontinence;
KW gene therapy; neurotrophic factor.
XX
XX Homo sapiens.
XX
XX MO9833529-A1.
XX
XX 06-AUG-1998.
XX
XX 04-FEB-1998; 98WO-US002051.
XX
XX 04-FEB-1997; 97US-0036862P.
XX
XX (GENE-) GENEMEDICINE INC.
XX
XX Coleman M;
XX
XX WPI; 1998-437184/37.
XX
XX N-PSDB; AAV50425.
XX
XX Treatment of urinary incontinence - by delivering nucleic acid vector for
XX expression of growth factor or neurotrophic factor in tissue(s).
XX
XX Claim 12d; Page 108-109; 117pp; English.
XX
XX A method has been developed of treating urinary incontinence (UI) in
XX mammals. The method comprises delivering a nucleic acid vector for the
XX expression of a growth factor or neurotrophic factor in a tissue or
XX tissues. The present sequence represents human IGF-1 (insulin-like growth
XX factor 1) which is used in the method of the invention. Due to the growth
XX and stimulatory effects of growth factors and neurotrophic factors,
XX introducing these factors to degenerated muscles in the urinary system
XX can improve UI by enhancing both their integrity and neural innervation
XX
XX Sequence 153 AA;
XX
XX Query Match 71.8%; Score 61; DB 2; Length 153;
XX Best Local Similarity 100.0%; Pred. No. 1.9e-55;
XX Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX 1 NKPTGYGSSRRAPOTGIIVDECCFRSCDRLRLMTWCAPLKPAKSARSYRAQRHTDMPKQTQ 60
XX 74 NKPTGYGSSRRAPOTGIIVDECCFRSCDRLRLMTWCAPLKPAKSARSYRAQRHTDMPKQTQ 133
XX
XX 61 K 61
XX
XX 134 K 134
XX
XX RESULT 11
XX AAM57882
XX ID AAM57882 standard; protein; 153 AA.
XX
XX AAM57882;
XX
XX 23-SEP-1998 (first entry)
XX
XX Human IGF-1 protein.
XX
XX IGF-1; insulin-like growth factor 1; skeletal alpha-actin gene promoter;
KW muscle atrophy; diabetes; osteoporosis; growth disorder; therapy; AIDS;
KW Chacot-marie-tooth disease; atherogenesis; haemophilia; neuropathy.
XX
XX Homo sapiens.
XX
XX MO9824922-A1.

```

XX 11-JUN-1998.
 PD Beert Local Similarity 71.8%; Score 61; DB 2; Length 153;
 XX 01-DEC-1997; 97WO-US021852.
 PF 02-DEC-1996; 96US-0031539P.
 PR 19-NOV-1997; 97US-00974572.
 XX
 PA (GENE-) GENEMEDICINE INC.
 XX (BAYU) BAYLOR COLLEGE MEDICINE.
 XX
 PI Coleman M, Schwartz R, Demayo FJ;
 XX
 DR MPI: 1998-333339/29.
 DR N-PSDB; AAY40793, AAY40794.
 XX
 PT New vector for expression of insulin-like growth factor-I - containing a
 PT skeletal alpha-actin gene promoter, IGF-I coding sequences and a 3'
 PT region from growth hormone 3'-UTR.
 XX
 PS Disclosure: Fig 13; 115pp; English.

CC This sequence is the human insulin-like growth factor I (IGF-I). The DNA
 CC can be used in the vector of the invention, for expression of a nucleic
 CC acid sequence in a cell, which comprises: (a) a nucleic acid cassette
 CC containing a sequence encoding IGF-I; (b) a 5' flanking region including
 CC one or more sequences necessary for expression of the nucleic acid
 CC cassette, including a promoter from a skeletal alpha-actin gene; (c) a
 CC linker connecting the 5' flanking region to a nucleic acid, the linker
 CC having a position for inserting the nucleic acid cassette, and, lacking
 CC the coding sequence of a gene with which it is naturally associated; and
 CC (d) a 3' flanking region, including a 3' untranslated region or a 3' non
 CC coding region or both, where the 3' flanking region is 3' to the position
 CC for inserting the nucleic acid cassette and comprises a sequence from a
 CC growth hormone 3'-UTR. The vector can provide for efficient IGF-I
 CC expression, particularly in gene therapy. It can be used for the delivery
 CC of IGF-I for treating diseases such as muscle atrophy, diabetes,
 CC neuropathy, osteoporosis, and growth disorders. They can be used for
 CC treating peripheral neuropathies resulting from diabetes, genetic disease
 CC such as Type I or Type II diabetes, genetic disease such as Charcot-Marie-
 CC tooth disease, AIDS, atherosclerosis, cardiovascular, cardiomyopathy,
 CC cerebrovascular, or peripheral vascular disease, haemophilia,
 CC inflammation and side-effects from anti-cancer and anti-viral drugs. The
 CC vectors can also be used to create transgenic animals for research or
 CC livestock improvement

CC Sequence 153 AA;
 XX
 SQ

Query Match . 71.8%; Score 61; DB 2; Length 153;
 Beert Local Similarity 100.0%; Pred. No. 1.9e-55;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLNEMCAPLKPKASRSVRAQSHTMPKTXQ 60
 DB 74 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLNEMCAPLKPKASRSVRAQSHTMPKTXQ 133
 QY 61 K 61
 DB 134 K 134

RESULT 12
 AAU84284
 ID AAU84284 standard; protein, 153 AA.
 AC AAU84284;
 XX
 DT 08-MAY-2002 (first entry)
 XX
 DE Human endometrial cancer related protein, IGFI.
 XX Human; endometrial cancer, differential expression; DNA microarray;
 KW protein microarray.

XX Homo sapiens.
 OS
 XX WO200209573-A2.
 FN
 XX 07-FEB-2002.
 PD
 XX 31-JUL-2001; 2001MO-US024104.
 PF
 XX 31-JUL-2000; 2000US-0221735P.
 PR
 XX (BIGHM) BRIGHAM & WOMENS HOSPITAL INC.
 PA
 XX Muller GL;
 PI
 XX MPI: 2002-179667/23.
 DR N-PSDB; ABX35504.
 DR
 XX
 PT Diagnosing endometrial cancer comprises determining expression of nucleic
 PT acid molecules or expression products that are differentially expressed
 PT in normal and malignant endometrium.

XX Claim 33; Page 189; 233pp; English.
 PS
 XX The invention relates to diagnosing endometrial cancer in a subject
 CC suspected of having endometrial cancer comprising determining the
 CC expression of a set of nucleic acid molecules or expression products in
 CC an endometrial sample suspected of being cancerous, where the set of
 CC nucleic acid molecules comprises at least 2 nucleic acid molecules
 CC selected from 50 fully defined sequences as given in the specification.
 CC The nucleic acids are used as an array of at least 2 of the 50 nucleic
 CC acids bound to a solid substrate. Also included is a solid-phase protein
 CC microarray comprising at least 2 antibodies or its antigen binding
 CC fragments, that specifically bind at least 2 different polypeptides from
 CC the 50 fully defined sequences as given in the specification; fixed to a
 CC solid substrate. The methods and arrays are useful for the diagnosis of
 CC endometrial cancer, selecting and monitoring treatment regimes and
 CC identification of lead compounds useful for the treatment of endometrial
 CC cancer. The present sequence is one of 50 proteins differentially
 CC expressed between cancerous and non-cancerous samples

CC Sequence 153 AA;
 XX
 SQ

Query Match 71.8%; Score 61; DB 5; Length 153;
 Beert Local Similarity 100.0%; Pred. No. 1.9e-55;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLNEMCAPLKPKASRSVRAQSHTMPKTXQ 60
 DB 74 NKPTGYGSSRRAPQTGIVDECCFRSCDRLRLNEMCAPLKPKASRSVRAQSHTMPKTXQ 133
 QY 61 K 61
 DB 134 K 134

RESULT 13
 AAU84341
 ID AAU84341 standard; protein, 153 AA.
 AC AAU84341;
 XX
 DT 08-MAY-2002 (first entry)
 XX
 DE Protein IGFI differentially expressed in breast cancer tissue.
 XX
 KM Human; diagnosis of breast cancer; endometrial cancer; breast tumour;
 KM MAI; mitotic activity index; cytostatic.
 XX
 OS Homo sapiens.
 XX
 FN WO200210436-A2.

PD 07-FEB-2002.
 XX
 XX 27-JUL-2001; 2001WO-US023642.
 XX
 XX 28-JUL-2000; 2000US-0222093P.
 XX
 XX (BGM) BRIGHAM & WOMEN'S HOSPITAL INC.
 PA (BAK/) BAK J.
 XX
 XX Baak J, Mutter GL;
 PI
 XX WPI; 2002-180084/23.
 DR N-PSDB; ABK35561.
 XX
 XX Diagnosing breast cancer comprises determining expression of nucleic acid
 PT molecules or expression products that are differentially expressed in
 PT normal and malignant tissue.
 PS
 XX Claim 37; Page 156-157; 219pp; English.
 CC The present invention relates to a method for diagnosing breast cancer in
 CC a subject suspected of having endometrial cancer. The method comprises
 CC determining the expression of a set of human genes or expression products
 CC in an endometrial sample suspected of being cancerous. The human genes of
 CC the invention are differentially expressed in breast tumours
 CC characterised as high or low MAI (mitotic activity index). These sets of
 CC genes can be used to discriminate between high and low MAI breast
 CC tumours. The invention also provides DNA and protein microarrays for
 CC analysing the expression of the human genes and their protein products.
 CC The methods and arrays are useful for the diagnosis and prognosis of
 CC endometrial cancer, selecting and monitoring treatment regimes, and
 CC identification of compounds useful for the treatment of endometrial
 CC cancer. AAU8411-AAU8431 represent the human proteins of the invention
 CC that are differentially expressed in breast cancer tissue
 CC
 XX
 SQ Sequence 153 AA;
 Query Match 71.8%; Score 61; DB 5; Length 153;
 Best Local Similarity 100.0%; Pred. No. 1.9e-55;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSSRAPQTVIVDECCFRSCDLRLWMYCAPLPKAKSARSVRAQHTDMPKIQ 60
 DB 74 NKPTGYSSSRAPQTVIVDECCFRSCDLRLWMYCAPLPKAKSARSVRAQHTDMPKIQ 133
 QY 61 K 61
 DB 134 K 134

RESULT 14
 ADA26451
 ID ADA26451 standard; protein; 153 AA.
 XX
 AC ADA26451;
 XX
 DT 20-NOV-2003 (first entry)
 XX
 DE Human insulin-like growth factor-I (IGF-I) polypeptide.
 XX
 KW Human; insulin-like growth factor-I; IGF-I; brain;
 KW central nervous system; CNS; neuronal tissue; blood; blood-brain barrier;
 KW lysosomal storage disease; Pompe disease; Tay-Sachs disease;
 KW Gaucher disease; Niemann-Pick disease; Hurler syndrome; Sly syndrome;
 KW Schindler disease; mucopolipidoses; infantile sialic acid storage disease;
 KW Batten disease; neuroprotective; cerebroprotective.
 XX
 OS Homo sapiens.
 XX
 XX US2003072761-A1.
 XX
 XX 17-APR-2003.

PF 30-APR-2002; 2002US-00136639.
 XX
 XX 16-OCT-2001; 2001US-0329650P.
 XX
 XX (LEBO/) LEBOWITZ J.
 PA
 XX
 XX Lebowitz J;
 PI
 XX WPI; 2003-615948/58.
 DR N-PSDB; ADA26452.
 XX
 XX Targeting a polypeptide to brain for treating lysosomal storage diseases,
 PT by providing polypeptide in association with insulin-like growth factor
 PT group to mammal, thus resulting in accumulation of polypeptide.
 XX
 PS Example 1; Fig 4A, 17pp; English.
 XX
 CC The invention relates to a method for targeting a polypeptide to the
 CC brain, involving providing a polypeptide in association with an insulin-
 CC like growth factor (IGF) group to a mammal, thus resulting in
 CC accumulation of the polypeptide in the brain of the mammal. The invention
 CC also relates to producing a central nervous system (CNS)-targeted
 CC polypeptide, identifying IGF-based peptide fragments that can reach
 CC neuronal tissue from blood, a nucleic acid encoding an IGF tag or a
 CC protein fused to an IGF tag and producing a therapeutic agent for
 CC targeting across the blood-brain barrier. The method is useful for
 CC treating lysosomal storage diseases that affect the central nervous
 CC system e.g. Pompe disease, Tay-Sachs disease, Gaucher disease, Niemann-
 CC Pick disease, Hurler syndrome, Sly syndrome, Schindler disease, Batten disease.
 CC Mucopolipidoses, infantile sialic acid storage disease and Batten disease.
 CC This sequence represents the human IGF-I polypeptide of the invention.
 CC
 XX
 SQ Sequence 153 AA;
 Query Match 71.8%; Score 61; DB 6; Length 153;
 Best Local Similarity 100.0%; Pred. No. 1.9e-55;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYSSSRAPQTVIVDECCFRSCDLRLWMYCAPLPKAKSARSVRAQHTDMPKIQ 60
 DB 74 NKPTGYSSSRAPQTVIVDECCFRSCDLRLWMYCAPLPKAKSARSVRAQHTDMPKIQ 133
 QY 61 K 61
 DB 134 K 134

RESULT 15
 ADC59343
 ID ADC59343 standard; protein; 153 AA.
 XX
 AC ADC59343;
 XX
 DT 18-DEC-2003 (first entry)
 XX
 DE Human insulin-like growth factor protein 1 (IGF-1).
 XX
 KW Alzheimer's disease; Alzheimer V642I variant APP;
 KW insulin-like growth factor; IGF; apoptosis inhibitor; neurotropic;
 KW neuroprotective.
 XX
 OS Homo sapiens.
 XX
 XX JP2002356440-A.
 PN
 XX 13-DEC-2002.
 PD
 XX 08-MAR-2002; 2002JP-00064401.
 XX
 XX 08-MAR-2001; 2001JP-00065721.
 XX
 XX (KEIO-) GH KEIO GIJUKU.
 PA
 XX

DR WPI; 2003-472663/45.
 XX
 PT An agent for preventing and treating familial Alzheimer's disease by
 PT inhibition of apoptosis of Alzheimer V642I variant APP with insulin-like
 PT growth factor I (IGF-I) via insulin-like growth factor I receptor (IGF-
 PT IR).
 PS Claim 2; SEQ ID NO 1; 21pp; Japanese.
 XX
 CC This invention relates to a novel agent for preventing familial
 CC Alzheimer's disease by inhibition of apoptosis of Alzheimer V642I variant
 CC APP, comprising insulin-like growth factor (IGF)-I optionally with one or
 CC more deleted, replaced or added amino acid(s) and exhibiting apoptosis
 CC inhibitory activity. The agent of the invention may have neurotrophic or
 CC neuroprotective and act as an inhibitor of Apoptosis of the Alzheimer
 CC V642I variant APP. The agent is useful for preventing and treating
 CC familial Alzheimer's disease. The present sequence represents the human
 CC insulin-like growth factor protein of the invention.
 XX
 SO Sequence 153 AA;
 Query Match 71.8%; Score 61; DB 7; Length 153;
 Best Local Similarity 100.0%; Pred. No. 1.9e-55;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NKPTGYGSSRRAPQTGIYDECCFRSCDRLRLMYCAPLPAKSAKSVRAQRHTDMPKXQ 60
 DB 74 NKPTGYGSSRRAPQTGIYDECCFRSCDRLRLMYCAPLPAKSAKSVRAQRHTDMPKXQ 133
 QY 61 K 61
 DB 134 K 134
 RESULT 16
 AD25494
 ID ADD25494 standard; protein; 153 AA.
 AC ADD25494;
 DT 15-JAN-2004 (first entry)
 DE Binding domain-immunoglobulin fusion protein-associated protein #24.
 XX
 CC Binding domain; immunoglobulin; fusion protein; cytosolic;
 CC antiarthritic; immunosuppressive; antidiabetic; antithyroid;
 CC neuroprotective; hinge region; immunoglobulin heavy chain;
 CC CH2 constant region; CH3 constant region; IgG1;
 CC antibody dependent cell-mediated cytotoxicity; ADCC; complement fixation;
 CC malignant condition; B-cell disorder; melanoma; carcinoma; sarcoma;
 CC rheumatoid arthritis; myasthenia gravis; Grave's disease;
 CC type I diabetes mellitus; multiple sclerosis; autoimmune disease.
 XX
 OS Unidentified.
 XX
 PN US2003118592-A1.
 PD 26-JUN-2003.
 PF 25-JUL-2002; 2002US-00207655.
 XX
 PR 17-JAN-2001; 2001US-0367358P.
 PR 17-JAN-2002; 2002US-0003530.
 PR 03-JUN-2002; 2002US-0385691P.
 XX
 PA (GENE-) GENE-CRAFT INC.
 PI Ledbetter JA, Hayden-Ledbetter MS, Thompson PA;
 XX
 DR WPI; 2003-801317/75.
 XX
 PT New binding domain-immunoglobulin fusion protein, useful for treating a
 PT subject having or suspected of having a malignant condition or a B-cell

PT disorder, e.g. melanoma, Grave's disease or autoimmune disease.
 XX
 XX Disclosure; SEQ ID NO 55; 157pp; English.
 PS
 CC The invention relates to a binding domain-immunoglobulin fusion protein
 CC comprising a binding domain polypeptide that is fused to an
 CC immunoglobulin hinge region polypeptide, an immunoglobulin heavy chain
 CC CH2 constant region polypeptide that is fused to the hinge region
 CC polypeptide, and an immunoglobulin heavy chain CH3 constant region
 CC polypeptide that is fused to the CH2 constant region polypeptide. The
 CC hinge region polypeptide comprises: a wild-type human IgG1 immunoglobulin
 CC hinge region polypeptide; a mutated human IgG1 immunoglobulin hinge
 CC region polypeptide; derived from (a) having 3 or more cysteine residues;
 CC where the mutated human IgG1 immunoglobulin hinge region polypeptide
 CC contains 2 cysteine residues, where the first cysteine is not mutated; a
 CC mutated human IgG1 immunoglobulin hinge region polypeptide; derived from
 CC (a) having 3 or more cysteine residues, where the mutated human IgG1
 CC immunoglobulin hinge region polypeptide contains no more than one
 CC cysteine residue; and a mutated human IgG1 immunoglobulin hinge region
 CC polypeptide; derived from (a) having 3 or more cysteine residues; where
 CC the mutated human IgG1 immunoglobulin hinge region polypeptide contains
 CC no cysteine residues. The binding domain-immunoglobulin fusion protein is
 CC capable of at least one immunological activity comprising antibody
 CC dependent cell-mediated cytotoxicity (ADCC) and complement fixation. The
 CC binding domain polypeptide is capable of specifically binding to an
 CC antigen. Also included are an isolated polynucleotide encoding the
 CC binding domain-immunoglobulin fusion protein, a recombinant expression
 CC construct comprising the polynucleotide (operably linked to a promoter),
 CC a host cell transformed or transfected with a recombinant expression
 CC construct, producing the binding domain-immunoglobulin fusion protein, a
 CC pharmaceutical composition comprising the binding domain-immunoglobulin
 CC fusion protein or polynucleotide and a carrier, and treating a subject
 CC having or suspected of having a malignant condition or a B-cell disorder.
 CC The binding domain-immunoglobulin fusion protein is useful for treating a
 CC subject having or suspected of having a malignant condition or a B-cell
 CC disorder, e.g. melanoma, carcinoma or sarcoma, rheumatoid arthritis,
 CC myasthenia gravis, Grave's disease, type I diabetes mellitus, multiple
 CC sclerosis or autoimmune disease. The present sequence is a binding domain
 CC -immunoglobulin fusion protein-associated protein sequence. Note: The
 CC sequence data for this patent formed part of the printed specification
 CC and is also available in electronic format directly from USPTO at
 CC seqdata.uspto.gov/sequence.html?docId=20030118592. The authors have not
 CC identified the sequences in the printed specification by their SEQ ID
 CC number therefore none of the sequences can be explicitly identified.
 XX
 SQ Sequence 153 AA;
 Query Match 71.8%; Score 61; DB 7; Length 153;
 Best Local Similarity 100.0%; Pred. No. 1.9e-55;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NKPTGYGSSRRAPQTGIYDECCFRSCDRLRLMYCAPLPAKSAKSVRAQRHTDMPKXQ 60
 DB 74 NKPTGYGSSRRAPQTGIYDECCFRSCDRLRLMYCAPLPAKSAKSVRAQRHTDMPKXQ 133
 QY 61 K 61
 DB 134 K 134
 RESULT 17
 AA23302
 ID AA23302 standard; protein; 156 AA.
 AC AA23302;
 DT 14-APR-1998 (first entry)
 DE Human insulin like growth factor 1 Ba isoform.
 XX
 DR Insulin like growth factor 1; IGF-1; Ba peptide; muscle disorder; heart;
 XX neuromuscular disease.
 XX

OS Homo sapiens.
 XX PD WO9733997-A1.
 XX PN 18-SEP-1997.
 XX PD 11-MAR-1997; 97WO-GB000658.
 XX PF 11-MAR-1996; 96GB-00005124.
 XX PR (UNLO) ROYAL FREE HOSPITAL SCHOOL MED.
 XX PA Goldspink G;
 XX PI MPI. 1997-470877/43.
 XX DR N-PSDB; AAT84894.
 XX XX
 XX XX Use of insulin like growth factor I characterised by presence of Bc
 PT peptide - to treat humans or animals, particularly muscle disorders,
 PT heart conditions or neuromuscular diseases.
 XX PS Disclosure: Fig 4; 33pp; English.
 XX XX
 XX CC A use of insulin like growth factor I (IGF-1) has been developed, and is
 CC characterised by the presence of the Bc peptide, or a functional
 CC equivalent, in the treatment or therapy of a human or animal. The IGF-1
 CC polypeptide can be used to treat muscular disorders, e.g. Duchenne or
 CC Becker muscular dystrophy, autosomal dystrophies and related progressive
 CC skeletal muscle weakness and wasting, muscle atrophy in ageing humans,
 CC spinal cord injury induced muscle atrophy and neuromuscular diseases, and
 CC cardiac disorders, e.g. diseases where promotion of cardiac muscle
 CC protein synthesis is a beneficial treatment, cardiomyopathies and acute
 CC heart failure or insult, specifically myocarditis or myocardial
 CC infection. It can also be used to promote bone fracture healing and
 CC maintenance of bone in old age. The present sequence represents human IGF
 CC -1 Ea isoform used in the present specification
 XX SQ Sequence 156 AA;

Query Match 71.8%; Score 61; DB 2; Length 156;
 Best Local Similarity 100.0%; Pred. No. 1.9e-55;
 Matches 61; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPPTGIVDECCFRSCDRLRLMYCAPLXAKAKRSYRAQRHDMPTQ 60
 DB 77 NKPTGYGSSRRAPPTGIVDECCFRSCDRLRLMYCAPLXAKAKRSYRAQRHDMPTQ 136
 QY 61 K 61
 DB 137 K 137

RESULT 18
 AAR36847
 ID AAR36847 standard; peptide; 67 AA.
 XX AAR36847;

XX 25-MAR-2003 (revised)
 DT 02-SEP-1993 (first entry)
 XX Insulin-like growth factor-I functional derivative.

XX IGF-I; disorder; treatment; survival; retinal neuronal cells; promotion;
 KM injury; ageing; disease; photodegeneration; trauma; axotomy;
 KM neurotoxic-excitatory degeneration; diabetic retinopathy;
 KM ischemic neuronal degeneration; inherited retinal dystrophy;
 KM Alzheimer's disease; infantile malignant osteopetrosis; Cholestasis;
 KM ceroid-lipofuscosis.

XX Homo sapiens.
 XX WO9308826-A1.
 XX PN

XX 13-MAY-1993.
 XX PD 03-NOV-1992; 92WO-US009443.
 XX PF 08-NOV-1991; 91US-00790690.
 XX PR 15-OCT-1992; 92US-00963329.
 XX XX
 XX PA (CEPH-) CEPHALON INC.
 XX PI Bozyczko-Coyne D, Neff N, Lewis ME, Iqbal M;
 XX DR WPI; 1993-167389/20.
 XX XX
 XX PT Use of IGF-I or IGF-II or their functional derivs. - for treating
 PT disorders characterised by death and/or dysfunction of retinal cells.
 XX PS Example; Page 50; 97pp; English.
 XX XX
 XX CC The sequence is that of a functional derivative of human insulin-like
 CC growth factor (IGF)-I which promotes the survival of retinal neuronal
 CC cells. It can be used for the treatment of retinal neuronal tissues which
 CC are suffering from the effects of injury, ageing and/or disease such as
 CC photodegeneration, trauma, axotomy, neurotoxic-excitatory degeneration,
 CC ischemic neuronal degeneration, inherited retinal dystrophy, diabetic
 CC retinopathy, Alzheimer's disease, infantile malignant osteopetrosis,
 CC ceroid lipofuscosis or cholestasis. (Updated on 25-MAR-2003 to correct FN
 CC field.)
 XX SQ Sequence 67 AA;

Query Match 52.9%; Score 45; DB 2; Length 67;
 Best Local Similarity 100.0%; Pred. No. 4.7e-39;
 Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPPTGIVDECCFRSCDRLRLMYCAPLXAKAKSA 45
 DB 23 NKPTGYGSSRRAPPTGIVDECCFRSCDRLRLMYCAPLXAKAKSA 67
 AC AAP40034;
 XX AAP40034;

XX 25-MAR-2003 (revised)
 DT 02-FEB-1992 (first entry)
 XX Sequence of human insulin-like growth factor I (IGF-I).

XX Yeast expression vector; somatic growth; growth promoter.
 KM Homo sapiens.

XX EP123228-A.
 XX PD 31-OCT-1984.

XX 13-APR-1984; 84EP-00104175.
 XX 25-APR-1983; 83US-00487950.

XX (CHIR) CHIRON CORP.

XX Barr PJ, Merryweather JP, Mullenbach G, Urdas MS;

XX WPI; 1984-271223/44.
 DR N-PSDB; AAN40026.

XX Prodn. of human insulin-like growth factors - by DNA recombinant method,
 PT utilising yeast transformant.

PS Disclosure; Page 23; 24pp; English.

XX CC The inventors claim a DNA construct which comprises AAN40026 or AAN40027.

CC CC The DNA constructs are stably replicated in yeasts in which pre-

CC CC polypeptides form in high yield. The yeast cells are then able to process

CC CC the pre-forms to the mature IGF. (Updated on 25-MAR-2003 to correct PA

CC CC field.)

SQ Sequence 70 AA;

Query Match 52.9%; Score 45; DB 1; Length 70;

Best Local Similarity 100.0%; Pred. No. 4.8e-39;

Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRYMCAPLKPAXSA 45

DB 26 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRYMCAPLKPAXSA 70

RESULT 20

ID AAP71539 standard; protein; 70 AA.

XX AC AAP71539;

XX AC 25-MAR-2003 (revised)

DT 10-MAR-2003 (revised)

DT 26-MAY-1991 (first entry)

XX DE Sequence of human insulin-like growth factor I (IGF-I).

XX KM Hormone; growth promoter.

XX OS Homo sapiens.

XX FH Key Location/Qualifiers

FT Disulfide-bond 6..47

FT Disulfide-bond 18..61

FT Disulfide-bond 48..52

XX JP62169733-A.

XX PD 25-JUL-1987.

XX PF 22-JAN-1986; 86JP-00011280.

XX PR 22-JAN-1986; 86JP-00011280.

XX PA (FUJI) FUJISAWA PHARM CO LTD.

XX DR WPI; 1987-246982/35.

XX PT Human insulin-growth factor, which has a new prim. structure - is prepd.

XX PT by oxidising reduced form IGF-I and treating the obid. cpds. by e.g.

XX PT chromatography, and is used for incorporating thymidine.

XX PS Claim 2; Page 1; 6pp; Japanese.

XX CC The IGF-I (and its salts) has strong effect for acceleration of thymidine

XX CC incorporation into animal cells, suggesting that it has strong growth

XX CC promoting effect. However it has no blood sugar lowering effect. (Updated

XX CC on 10-MAR-2003 to add missing OS field.) (Updated on 25-MAR-2003 to

XX CC correct PA field.)

SQ Sequence 70 AA;

Query Match 52.9%; Score 45; DB 1; Length 70;

Best Local Similarity 100.0%; Pred. No. 4.8e-39;

Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRYMCAPLKPAXSA 45

DB 26 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRYMCAPLKPAXSA 70

RESULT 21

ID AAP70414 standard; protein; 70 AA.

XX AC AAP70414;

XX AC 25-MAR-2003 (revised)

DT 19-FEB-1991 (first entry)

XX DE Sequence of oxidative human insulin-like growth factor I (IGF-I) (A

XX DE type).

XX KM Hormone; sanatomedin.

XX OS Homo sapiens.

XX PN JP62190199-A.

XX PD 20-AUG-1987.

XX PF 14-FEB-1986; 86JP-00031512.

XX PR 14-FEB-1986; 86JP-00031512.

XX PA (FUJI) FUJISAWA PHARM CO LTD.

XX DR WPI; 1987-273817/39.

XX PT Human insulin like growth factor I prodn. - by oxidising reductive human

XX PT insulin-like growth factor.

XX PS Claim 2; Page 935; 6pp; Japanese.

XX CC The production of IGF-I-A by oxidising reductive human insulin-like

XX CC growth factor in a buffer soln. and separating I-A from the reaction

XX CC soln. is improved by the presence of an organic solvent which can

XX CC dissolve in the buffer soln. in the reaction system. (Updated on 25-MAR-

XX CC 2003 to correct PA field.)

SQ Sequence 70 AA;

Query Match 52.9%; Score 45; DB 1; Length 70;

Best Local Similarity 100.0%; Pred. No. 4.8e-39;

Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRYMCAPLKPAXSA 45

DB 26 NKPTGYGSSRRAPOTGIVDECCFRSCDLRLRYMCAPLKPAXSA 70

RESULT 22

ID AAP93366 standard; protein; 70 AA.

XX AC AAP93366;

XX AC 17-JUL-1990 (first entry)

XX DE Analogue IGF122 of human insulin-like growth factor-I (hIGF-I).

XX KM Synthetic gene; human insulin-like growth factor I; IGF122; Analogue B;

XX KM lactation enhancer; growth promoter; wound healing; erythropoietic.

XX OS Homo sapiens.

XX PN EP309050-A.

XX PD 29-MAR-1989.

XX PF 16-SEP-1988; 88EP-00202032.

PR 21-SEP-1987; 87US-0009367.
 XX
 XX (MERI) MERCK & CO INC.
 PA
 XX Applebaum JD, Bayne ML, Cascieri MA;
 PI
 XX WPI, 1989-095235/13.
 DR
 XX N-PSDB; AAN90689.
 DR
 XX Human insulin-like growth factor analogues - have higher activity due to
 PT reduced affinity for serum components while retaining affinity to type I
 PT receptor.
 XX
 PS Disclosure; Page ?; 27pp; English.

CC It is a synthetic polypeptide analogue of hIGF-I called IGF122 or
 CC Analogue B. Analogue B retains nearly full activity at the type I IGF
 CC receptor but does not bind to serum components. It is considerably more
 CC active than wild-type hIGF-1. It is highly active as an agent to increase
 CC the yield and efficiency of milk prodn. esp. in cows. It is also used as
 CC a growth promontant, to promote wound healing and to stimulate
 CC erythropoiesis. It is produced by chemical synthesis or recombinant DNA
 CC techniques using IGF-I DNA sequences prep'd. synthetically, chromosomally
 CC or by recombinant DNA techniques, to transform bacterial, yeast or tissue
 CC culture cell lines. A synthetic gene for Analogue B is claimed in Claim
 CC 12
 CC
 SQ Sequence 70 AA;

Query Match 52.9%; Score 45; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 4.8e-39;
 Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 NKPTGYGSSRRAPQTGIYDECCFRSCDRLRLMYCAPLKPAXSA 45
 |||||
 DB 26 NKPTGYGSSRRAPQTGIYDECCFRSCDRLRLMYCAPLKPAXSA 70

RESULT 23
 AAP94660
 ID AAP94660 standard; protein; 70 AA.
 XX
 AC AAP94660;
 XX
 DT 17-JUL-1990 (first entry)
 XX
 DE Analogue IGF252 of human insulin-like growth factor-I (hIGF-I).
 XX
 KM Synthetic gene; human insulin-like growth factor I; IGF252; Analogue D;
 KM lactation enhancer; growth promoter; wound healing; erythropoiesis.
 XX
 OS Homo sapiens.
 XX
 PN EP309050-A.
 XX
 PD 29-MAR-1989.
 XX
 PF 16-SEP-1988; 88EP-00202032.
 XX
 PR 21-SEP-1987; 87US-0009367.
 XX
 PA (MERI) MERCK & CO INC.
 PI Applebaum JD, Bayne ML, Cascieri MA;
 XX
 DR WPI, 1989-095235/13.
 DR N-PSDB; AAN90691.
 XX
 PT Human insulin-like growth factor analogues - have higher activity due to
 PT reduced affinity for serum components while retaining affinity to type I
 PT receptor.
 XX
 PS Disclosure; Page; 27pp; English.

XX
 CC It is a synthetic polypeptide analogue of hIGF-I called IGF252 or
 CC Analogue D. Analogue D retains nearly full activity at the type I IGF
 CC receptor but does not bind to serum components. It is considerably more
 CC active than wild-type hIGF-1. It is highly active as an agent to increase
 CC the yield and efficiency of milk prodn. esp. in cows. It is also used as
 CC a growth promontant, to promote wound healing and to stimulate
 CC erythropoiesis. It is produced by chemical synthesis or recombinant DNA
 CC techniques using IGF-I DNA sequences prep'd. synthetically, chromosomally
 CC or by recombinant DNA techniques, to transform bacterial, yeast or tissue
 CC culture cell lines. A synthetic gene for Analogue D is claimed in Claim
 CC 16
 CC
 SQ Sequence 70 AA;

Query Match 52.9%; Score 45; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 4.8e-39;
 Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 NKPTGYGSSRRAPQTGIYDECCFRSCDRLRLMYCAPLKPAXSA 45
 |||||
 DB 26 NKPTGYGSSRRAPQTGIYDECCFRSCDRLRLMYCAPLKPAXSA 70

RESULT 24
 AAP94661
 ID AAP94661 standard; protein; 70 AA.
 XX
 AC AAP94661;
 XX
 DT 17-JUL-1990 (first entry)
 XX
 DE Analogue IGF130 of human insulin-like growth factor-I (hIGF-I).
 XX
 KM Synthetic gene; human insulin-like growth factor I; IGF130; Analogue C;
 KM lactation enhancer; growth promoter; wound healing; erythropoiesis.
 XX
 OS Homo sapiens.
 XX
 PN EP309050-A.
 XX
 PD 29-MAR-1989.
 XX
 PF 16-SEP-1988; 88EP-00202032.
 XX
 PR 21-SEP-1987; 87US-0009367.
 XX
 PA (MERI) MERCK & CO INC.
 PI Applebaum JD, Bayne ML, Cascieri MA;
 XX
 DR WPI, 1989-095235/13.
 DR N-PSDB; AAN90690.
 XX
 PT Human insulin-like growth factor analogues - have higher activity due to
 PT reduced affinity for serum components while retaining affinity to type I
 PT receptor.
 XX
 PS Disclosure; Page ?; 27pp; English.

CC It is a synthetic polypeptide analogue of hIGF-I called IGF130 or
 CC Analogue C. Analogue C retains nearly full activity at the type I IGF
 CC receptor but does not bind to serum components. It is considerably more
 CC active than wild-type hIGF-1. It is highly active as an agent to increase
 CC the yield and efficiency of milk prodn. esp. in cows. It is also used as
 CC a growth promontant, to promote wound healing and to stimulate
 CC erythropoiesis. It is produced by chemical synthesis or recombinant DNA
 CC techniques using IGF-I DNA sequences prep'd. synthetically, chromosomally
 CC or by recombinant DNA techniques, to transform bacterial, yeast or tissue
 CC culture cell lines. A synthetic gene for Analogue C is claimed in Claim
 CC 14
 CC
 SQ Sequence 70 AA;

Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 4.8e-39;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLRMTCAPLKPAKSA 45
26 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLRMTCAPLKPAKSA 70
DB

DB 26 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLRMTCAPLKPAKSA 70
Search completed: March 3, 2004, 11:53:23
Job time: 57 secs

RESULT 25

AAP91502
ID AAP91502 standard; peptide; 70 AA.

XX AAP91502;

AC 25-MAR-2003 (revised)
DT 06-JUN-1990 (first entry)

XX New insulin-like growth factor-1 (IGF-I) deriv.

XX Insulin-like growth factor-I; IGF-I; derivative; disulphide bond;
XX growth promoter; tissue repair.

OS Unidentified.

XX Key Location/Qualifiers

XX Disulfide-bond 6 /note= "Bonded to Cys-47"

XX Disulfide-bond 18 /note= "Bonded to Cys-61"

XX Disulfide-bond 47 /note= "Bonded to Cys-6"

XX Disulfide-bond 48 /note= "Bonded to Cys-52"

XX Disulfide-bond 52 /note= "Bonded to Cys-48"

XX Disulfide-bond 61 /note= "Bonded to Cys-18"

XX Misc-difference 70 /label= OTHER

XX /note= "Ala-NH2 or Ala-OH"

XX JP01066199-A.

XX 13-MAR-1989.

XX 04-SEP-1987; 87JP-00222735.

XX 04-SEP-1987; 87JP-00222735.

XX (SUMU) SUMITOMO SEIYAKU KK.

XX WPI; 1989-119491/16.

XX New insulin-like growth factor-I deriv. - prepd. by applying oxidn. to
XX specific peptide, used as medical compn. for promoting growth or
XX repairing tissue.

XX Disclosure; Page 1; 8pp; Japanese.

XX The deriv. or salt is produced by oxidation of the AAP91502. IGF-I deriv.
XX has growth promotion action only. It is used as a medical compn. for
XX promoting growth or repairing tissue. (Updated on 25-MAR-2003 to correct
XX PA field.)

XX Sequence 70 AA:

XX

Query Match 52.9%; Score 45; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 4.8e-39;
Matches 45; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 NKPTGYGSSRRAPQTGIVDECCFRSCDLRLRMTCAPLKPAKSA 45